

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING - SEMESTER-V • EXAMINATION – SUMMER 2013

Subject Code: 351702**Date: 29-11-2013****Subject Name: Process Instrumentation - II****Time: 02:30 pm - 05:00 pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.
4. English version is considered to be Authentic.

- Q.1** (a) What is Seeback Effect? Explain Thermocouple construction with diagram. **07**
(b) Explain any one non-contact type Temperature measurement. **07**
- Q.2** (a) State different types of Thermocouple with positive and negative extension, temperature range. **07**
(b) Which types of error will be generated in Filled System Thermometry? **07**
OR
(b) Temperature measurement by Fiber optic. **07**
- Q.3** (a) Explain any two types of thermostat. **07**
(b) Magnetic type Floating level switch. **07**
OR
- Q.3** (a) Construction and Working of Air Purge System for level measurement. **07**
(b) Explain capacitance type level measurement with its working principle. **07**
- Q.4** (a) Define Torque. How we measure Torque using Strain Gauge? **07**
(b) Difference between Force and Torque. Explain Electric Torsion meter. **07**
OR
- Q.4** (a) Working principle of piezo-electric sensor. How it used to measure vibration? **07**
(b) Explain elastic force meter with application. **07**
- Q.5** (a) Why level measurement is required in process industries? **07**
Explain Ultrasonic level detector.
(b) Explain various effects related with filled system **07**
OR
- Q.5** (a) State different types of filled system Thermometer. **07**
Explain Class-I filled system .
(b) Explain RTD construction and working with diagram. **07**
