

**GUJARAT TECHNOLOGICAL UNIVERSITY****Diploma Semester -IV Remedial Examination December - 2010****Subject code: 345501****Subject Name: Instrumentation Control & Quality Assurance****Date: 11 /12 /2010****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.

- Q.1** (a) Classify the measuring instrument. Explain factors for selecting measuring instruments. **07**
- (b) Define “errors in measurement”. Explain different sources of errors in measurement. **07**
- Q.2** (a) Explain vernier caliper with neat sketch **07**
- (b) Explain role of third party inspection agency working in Fabrication industry. List different TPI working in Fabrication industry **07**
- OR**
- (b) Explain micrometer screw gauge with neat sketch. **07**
- Q.3** (a) Explain following instruments with neat sketch. **07**
1. Bevel protectors      2. Sine bars
- (b) Make an angle of 33° 09' 36" by using angle gauge set. **07**
- OR**
- Q.3** (a) Make 69.4585 mm dimension by using M-112 slip gauge set. **07**
- (b) Explain following pressure measuring instruments with Neat sketch. **07**
1. Borden tube pressure gauge      2. Pressure transducer.
- Q.4** (a) Explain following temperature measuring instruments with neat sketch. **07**
1. Mercury in glass thermo meter      2. Radiation pyrometer
- (b) Explain following flow measuring instruments with neat Sketch. **07**
1. Venturimeter      2. Rota meter
- OR**
- Q. 4** (a) Explain construction and working of Tomlinson surface Finish tester with neat sketch. **07**
- (b) Explain open loop & closed loop control system with neat sketch. **07**
- Q.5** (a) Explain inspection of process equipment. Explain duties of inspector. **07**
- (b) Explain interchangeability and selective assembly **07**
- OR**
- Q.5** (a) What is calibration? Explain calibration procedure of Vernier caliper with neat sketch. **07**
- (b) Write short note on **07**
1. TQM      2. ISO 9000

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