

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering Sem. - IV - Examination – June- 2011****Subject code: 345501****Subject Name: Instrumentation Control & Quality Assurance****Date: 02/06/2011****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 Authentic

- Q.1** (a) Define the term “metrology”. Explain objectives of Metrology. **07**
 (b) Classify the measuring instrument. Explain factors for selecting measuring Instruments **07**
- Q.2** (a) Explain vernier height gauge with neat sketch. **07**
 (b) Explain Following terms briefly **07**
 (1) measuring range (2) sensitivity (3) hysteresis
 (4) response time (5) repeatability (6) Precision & accuracy
 (7) inaccuracy
- OR**
- (b) Make a dimension 26.3255 by M112 slip gauge set. **07**
- Q.3** (a) Explain bevel protector with neat sketch. **07**
 (b) Make an angle 30° 50' 30" by using angle gauge set. **07**
- OR**
- Q.3** (a) Explain Taylor Hobson telysurf surface measuring instrument With neat sketch. **07**
 (b) Explain Auto collimator with neat sketch **07**
- Q.4** (a) Explain Borden Tube Pressure gauge with neat sketch. **07**
 (b) Explain Rota meter with neat sketch. **07**
- OR**
- Q. 4** (a) Explain Radiation Pyrometer with neat sketch. **07**
 (b) Explain Automatic control system with block diagram. **07**
- Q.5** (a) Explain Need and types of inspection. Compare centralized and decentralized inspection. **07**
 (b) Write brief note on **07**
 (1) TQM (2) ISO 9000
- OR**
- Q.5** (a) Define the term “quality”. Explain following term briefly, **07**
 (1) Quality of design. (2) Quality of conformance.
 (b) Write brief note on **07**
 (1) 5 – S (2) KAIZEN
