

GUJARAT TECHNOLOGICAL UNIVERSITY**Diploma Engineering - SEMESTER-IV • EXAMINATION – SUMMER 2013****Subject Code: 345501****Date: 03-06-2013****Subject Name: Instrumentation Control and Quality Assurance****Time: 10:30 am - 01:00 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) Classify the measuring instrument. Explain the factors affecting for Selection of measuring instruments. **07**
- (b) Define the term “static characteristics” of instruments. **07**
Explain in brief : the different static characteristics of them .

- Q.2** (a) Define “ Errors ” in measurement. **07**
Classify & Explain different types of errors in measurement.
- (b) Define the term “metrology” and explain the various objective of metrology **07**

OR

- (b) Explain in brief : Micrometer screw gauge with neat sketch. **07**
- Q.3** (a) Make 35.2685 mm dimension by using M -112 slip gauge set. **07**
- (b) Explain in brief with neat sketch application of sine bar with use of slip gauge set and dial gauge. **07**

OR

- Q.3** (a) Make 30°10'18" dimension by using angle gauge set draw Its sketch. **07**
- (b) Define the term “straightness , flatness , square-ness & parallelism ”. List different methods to measure each of them. **07**

- Q.4** (a) Explain calibration of dead weight piston gauge with neat sketch. **07**
- (b) List different flow measuring devices. Explain in brief : Any two device with neat sketch **07**

OR

- Q.4** (a) Explain thermister with neat sketch. **07**
- (b) Explain automatic control system with block diagram. **07**

- Q.5** (a) Explain role of third party in inspection agency working in fabrication industry. List different TPI working in field of fabrications . **07**
- (b) Define the term quality control. **07**
Explain the objective and advantages quality control.

OR

- Q.5** (a) Explain duties of inspector in fabrication industry ? **07**
- (b) Write a short note on : **07**
1. Quality circle
 2. Kaizen
