

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY
DIPLOMA ENGINEERING – SEMESTER – IV • EXAMINATION – SUMMER- 2017

Subject Code: 3345501

Date: 27-04 -2017

Subject Name: Instrumentation Control & Quality Assurance

Time: 10:30 AM TO 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. Use of programmable & Communication aids are strictly prohibited.
5. Use of only simple calculator is permitted in Mathematics.
6. English version is authentic.

- Q.1** (a) Write a brief note on Interchangeability and Selective Assembly. **07**
- (b) Make a dimension of 62.1285 mm by using M 112 Slip gauge set. **07**
- Q.2** (a) Explain construction, working and principal of micrometer screw with neat sketch. **07**
- (b) Define the term “Roundness”. Explain following methods for checking roundness with neat sketch. **07**
- i. Micrometer method
 - ii. V-block and dial indicator method
- OR
- (b) Prepare an angle of 30°30’30” by using standard angle gauge set. **07**
Draw its setup.
- Q.3** (a) Explain constructions, working and precaution required use in Sine Bar. **07**
- (b) Explain Taylor Hobson Telysurf with neat sketch. **07**
- OR
- Q.3** (a) Explain construction, working and principle of Clinometers. **07**
- (b) Explain different Indirect measuring methods of Surface Roughness. **07**
- Q.4** (a) Define following term with neat sketch:- **07**
- i. Absolute Pressure
 - ii. Atmospheric Pressure
 - iii. Gauge Pressure
 - iv. Vacuum Pressure
- (b) Explain Automatic control system with Block diagram. **07**
- OR
- Q.4** (a) Explain different Flow measuring instrument with neat sketch:- **07**
- i. Bellows Type Meter
 - ii. Rotating Impeller Meter
 - iii. Rotating Lobs Meter
- (b) List different Factor affecting selection of Pressure Measuring Instrument. **07**

- Q.5** (a) Compare Centralize and Decentralize Inspection system. **07**
(b) Write a brief note on 5-S **07**

OR

- Q.5** (a) Explain following term briefly: **07**
i. Quality of Performance.
ii. Quality of Conformance.
(b) Write a brief note on ISO: 9000. **07**
