

Seat No.: _____
No. _____

Enrolment

GUJARAT TECHNOLOGICAL UNIVERSITY
Diploma Engineering - SEMESTER-IV • Examination – WINTER • 2014

Subject Code: 3345501

Date: 26-11-2014

Subject Name: Instrumentation Control and Quality Assurance

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) Define the term Metrology and explain objective of Metrology. 07
(b) Make dimension of 56.3645 mm by using M 112 slip gauge set. 07
- Q.2 (a) Explain A type vernier caliper with neat sketch. 07
(b) Explain precaution required in use of vernier caliper 07
OR
(b) Explain following precision indirect measuring instrument with neat sketch. 07
1. Telescopic gauge
2. Hemispheric gauge
3. Bore gauge
- Q.3 (a) Explain construction, working principal, and precaution required use in Sign bar. 07
(b) Prepare an angle of 30°30'30" by using standard angle gauge set. 07
Draw its setup.
OR
- Q.3 (a) Explain Taylor Hobson Telysurf with neat sketch. 07
(b) What is Lay? Explain different type of lay with neat sketch. 07
- Q.4 (a) State Application of following Transducer:- 07
1. Resistance Transducer
2. Inductance Transducer
3. Capacitance Transducer
4. Piezo Electric Transducer
(b) Explain following temperature measuring instrument with sketch:- 07
1. Mercury in glass Thermometer
2. Radiation Pyrometer
OR
- Q. 4 (a) Define following term with neat sketch:- 07
1. Absolute Pressure
2. Atmospheric Pressure
3. Gauge Pressure
4. Vacuum Pressure
(b) Explain following pressure measuring instrument with neat sketch:- 07
1. U-tube Manometer
2. Bourdon Tube Pressure Gauge
- Q.5 (a) Explain different flow measuring instrument with neat sketch:- 07

1. Bellows Type meter
 2. Rotating Impeller Meter
 3. Rotating Lobs Meter
- (b) Explain Automatic control system with block diagram. 07
- OR
- Q.5 (a) Explain different type of inspection in industry. 07
- (b) Define the term quality control. State different step quality control program. 07
