

GUJARAT TECHNOLOGICAL UNIVERSITY**DIPLOMA ENGINEERING – SEMESTER – 4(NEW) • EXAMINATION – SUMMER 2018****Subject Code: 3345501****Date: 28-Apr-2018****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. Each question carry equal marks (14 marks)

- Q.1** (a) Explain Plug gauge, Snap Gauge and Ring Gauge with neat sketch. **07**
 (b) Make a dimension of 71.2265 mm by using M 112 slip gauge set. **07**
- Q.2** (a) Explain Vernier height gauge with neat sketch. **07**
 (b) Explain following precision indirect measuring instrument with neat sketch. **07**
- i. Telescopic gauge
 - ii. Hemispheric gauge
 - iii. Bore gauge
- OR
- (b) Prepare an angle of 38°50'54'' by using standard angle gauge set. **07**
 Draw it set up.
- Q.3** (a) Explain construction, working, principle, sensitivity, and application of Spirit Level with neat sketch. **07**
 (b) Explain Tomlimson Surface Roughness meter with neat sketch. **07**
- OR
- Q.3** (a) Explain Angle Dekkar with neat sketch. **07**
 (b) Define the Lay. Explain different type of lay with neat sketch. **07**
- Q.4** (a) Explain following temperature measuring instrument with sketch:- **07**
- i. Mercury in glass Thermometer
 - ii. Bimetallic Thermometer
 - iii. Resistance Thermometer
 - iv. Optical Pyrometer
- (b) Draw Block diagram of Automatic Control System and label its elements with necessary function. **07**
- OR
- Q.4** (a) Explain different flow measuring instrument with neat sketch:- **07**
- i. Nutating Disc Meter
 - ii. Pitot Tube
 - iii. Hot Wire anemometer
- (b) Explain different factor affecting selection of Pressure measuring instrument. **07**
- Q.5** (a) Explain Before welding, During welding and After welding inspection. **07**
 (b) Write brief note on QUALITY CIRCLE. **07**
- OR
- Q.5** (a) Define the term Quality Control and explain its objective in brief. **07**

(b) Write brief note on KAIZEN.

07
