

GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER-IV EXAMINATION – WINTER 2015

Subject Code: 141901**Date:30/12/2015****Subject Name: Mechanical Measurement and Metrology****Time: 02:30pm to 05:00pm****Total Marks: 70****Instructions:**

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Distinguish between precision and accuracy with neat sketch, in detail. **07**
 (b) Describe wave length standard with its advantages. **07**

- Q.2** (a) State the types of Micrometers. Describe with neat sketch construction and working of Micrometer. **07**
 (b) Describe Telescopic gauge in detail, with neat sketch. **07**

OR

- (b) Sketch and describe optical comparator with its industrial advantage. **07**

- Q.3** (a) Describe with neat sketch principle, construction and working of Auto-collimator. **07**
 (b) Explain how small angle of work piece is measured with Angle dekkor. **07**

OR

- Q.3** (a) Explain pitch measurement of internal screw threads with instrument. **07**
 (b) Describe measurement of effective diameter by TWO wire method, in screw thread. **07**

- Q.4** (a) Write short note on the Parkinson gear tester. **07**
 (b) Explain, with neat sketch Gear tooth vernier caliper. **07**

OR

- Q.4** (a) State working principle of Thermo couple .State its materials use in it. **07**
 (b) Explain Proving ring in brief, with neat sketch. **07**

- Q.5** (a) Describe working and construction of Tomlinson surface tester for surface measurement. **07**
 (b) Describe construction and working of Optical pyrometer. **07**

OR

- Q.5** (a) Write short note on Thermistor. **07**
 (b) Explain the construction and working of LVDT with application. **07**
