

**GUJARAT TECHNOLOGICAL UNIVERSITY**  
**PDDC - SEMESTER-II EXAMINATION – SUMMER 2016**

**Subject Code: X21903****Date: 04/06/2016****Subject Name: MECHANICAL MEASUREMENT & METROLOGY****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.

- Q.1** (a) Classify different types of errors in measurement systems. **07**  
 (b) Define Measurement & Metrology. Explain the role of different Standards. **07**
- Q.2** (a) What is the use of telescopic Gauge ? Explain with sketch. **07**  
 (b) Explain Construction & Working of Vernier bevel protector. **07**
- OR**
- (b) Define “ Straightness ” & Methods for Measuring it. **07**
- Q.3** (a) Explain Sinebar with Examples. **07**  
 (b) Explain Accuracy & Precision. **07**
- OR**
- Q.3** (a) Describe Alignment test performed for lathe m/c. **07**  
 (b) Discuss (1) Vapour pressure Thermometer (2) Gas filled thermometer. **07**
- Q.4** (a) Draw & explain U-tube differential manometer. **07**  
 (b) Discuss the principle of pyrometer with sketch. **07**
- OR**
- Q.4** (a) Describe types of pressure measuring instruments. **07**  
 (b) Explain surface Texture & Elements of Surface Roughness. **07**
- Q.5** (a) List the temperature measuring instruments & explain one. **07**  
 (b) Explain the constructions & working of LVDT stating applications. **07**
- OR**
- Q.5** (a) Explain McLeod gauge with neat sketch. **07**  
 (b) What is Sigma Comparator ? Explain it. **07**

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