

**DIPLOMA IN MECHANICAL ENGINEERING  
(DME)**

**Term-End Examination**

**June, 2013**

**BME-062 : METROLOGY AND  
INSTRUMENTATION**

*Time : 2 Hours*

*Maximum Marks : 70*

*Note : Answer **any ten** questions. All questions carry **equal marks**. Use of calculator is permitted.*

1. Explain mechanical limit switches with diagram. 7
2. Write about photoelectric sensors and its applications. 7
3. What are the uses and the advantages of laser interferometer ? 7
4. Explain the principle of Tachometer and write its application. 7
5. Describe the types of fits with diagram. 7
6. Explain the working of micrometer with diagram. 7

7. Define the following terms : 7
- (a) Vernier constant
  - (b) Least count
  - (c) Transducer
  - (d) Wringing
  - (e) Gauge factor
  - (f) Comparator
  - (g) Piezo resistive effect
8. What are the various comparators ? Explain any one of them. 7
9. Explain the following terms with diagrams : 7
- (a) Ring gauge
  - (b) Taper gauge
  - (c) Snap gauge
10. Write about various components of a projector. 7
11. Describe Co-ordinate Measuring Machine (CMM) and its main elements. 7
12. Describe the working of a Interferometer. 7
13. Write about the working of vernier height gauge with neat diagram. 7
14. Write down the advantages of a Projector. 7
-