

**DIPLOMA IN MECHANICAL ENGINEERING  
(DME)**

**00506** Term-End Examination  
December, 2014

**BME-062 : METROLOGY AND INSTRUMENTATION**

*Time : 2 hours*

*Maximum Marks : 70*

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*Note : Answer any **ten** questions. All questions carry equal marks.*

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1. Write about types of fit with suitable diagrams. 7
2. Describe the working of Vernier bevel protractor with diagram. 7
3. Define and explain any **two** of the following terms :  $2 \times 3 \frac{1}{2} = 7$ 
  - (a) Sine bar
  - (b) Optical square
  - (c) Transducer
4. What are the types of comparators ? Explain any one of them. 7
5. Write the types of CMM and discuss any one of them. 7

6. Explain the working of Potentiometer Transducer. 7
  7. Discuss about optical flat. 7
  8. Write about the elements of Generalized measurement system. 7
  9. Classify the plug gauges and explain any one of them. 7
  10. Briefly explain the errors in the threads. 7
  11. Explain the construction of Optical projector. 7
  12. Distinguish between Liquid Gas and Bimetallic Thermometer. 7
  13. Discuss the unilateral and bilateral tolerances with examples. 7
  14. Explain the characteristics of piezoelectric materials. 7
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