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BME-062

DIPLOMA IN MECHANICAL ENGINEERING (DME)

Term-End Examination

June, 2015

00039

BME-062 : METROLOGY AND INSTRUMENTATION

Time : 2 hours *Maximum Marks : 70*

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

1. Explain the principles of mechanical measuring instruments. 7

2. Distinguish between interchangeable manufacturing and selective assembly system. 7

3. Define and explain any ***two*** of the following : $2 \times 3\frac{1}{2} = 7$

(a) Spirit level

(b) Micrometer

(c) Dial gauges

4. Name the methods of measuring roundness and explain any one of them. 7

5. Discuss the advantages and possible source of errors in CMM. 7

6. Write the merits, demerits and applications of LVDT. 7

7. Describe the working of mechanical optical comparators. 7

8. Explain the characteristics of materials for gauges. 7

9. Discuss the various pitch errors. 7

10. Name the types of interferometers and explain any one of them. 7

11. Explain the requirements of transducers. 7

12. Distinguish between Radiation pyrometer and Optical pyrometer. 7

13. Explain the types of fit with a neat sketch. 7

14. Differentiate between primary and secondary transducers. 7