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**M.Tech. 3rd Semester (MAE) CBCS Scheme
Examination, December-2017
ADVANCED METROLOGY AND CALIBRATION
Paper-16 MM A23 CI**

Time allowed : 3 hours] [Maximum marks : 100

*Note : Students are required to attempt any five questions.
The students have to attempt first common
question, which is compulsory and one question
from each of four units.*

1. (a) Hole basis system of tolerance.
- (b) Reasons for surface errors.
- (c) Working principle of laser-micrometer.
- (d) Use of slip gauges.
- (e) What do you mean by calibration.
- (f) Optical flats.
- (g) Profile Projector.
- (h) Bearing Ratio 2.5×8=20

Unit-I

2. Write about :
 - (a) Effects of electroplating on the fits. 10
 - (b) Go and No-Go gauges design. 10

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3. Discuss in detail about surface texture parameters. 20

Unit-II

4. Discuss :
- (a) Profile Projector. 10
 - (b) Various grades of pin gauges. 10
5. Explain constructional details, underlying principle, working procedure and application of screw thread micrometer. 20

Unit-III

6. Write about :
- (a) Vernier caliper 10
 - (b) Dial gauges 10
7. Write in detail about calibration of mechanical measuring instruments. 20

Unit-IV

8. Write in detail about calculation of uncertainty. 20
9. Write in detail about Co-ordinate measuring machine. 20

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