PVP 12

Code: ME5T4

III B.Tech - I Semester – Regular Examinations - November 2014

ENGINEERING METROLOGY
(MECHANICAL ENGINEERING)

Duration: 3 hours Marks: 5x14=70

Answer any **FIVE** questions. All questions carry equal marks

1. a) State the two systems for writing the tolerances. 7 M

   b) Differentiate between the hole and shaft basis system. 7 M

2. Describe the constructional features and working mechanism of dial indicators. 14 M

3. a) Explain the working mechanism of Michaleson's Interferometer. 7 M

   b) What are optical flats and their uses. 7 M

4. a) What are the basic four geometrical irregularities of the surfaces. 7 M

   b) With the help of diagram, explain the constructional features of Talysurf surface meter. 7 M

5. a) How R type mechanical comparator works? 7 M

b) State the advantages and disadvantages of mechanical comparator. 7 M

6. a) Sketch the spur gear with complete gear terminology. 7 M

b) Briefly explain about Parkinson gear tester. 7 M

7. a) Explain the causes and effect of pitch errors in the screw threads. 7 M

b) Describe the method to measure the effective diameter of a screw thread. 7 M

8. What are the different alignment test performed on the milling machines. 14 M