Roll.No

B.E/ B.Tech. (Full Time) DEGREE END SEMESTER EXAMINATIONS, APRIL / MAY 2012

INDUSTRIAL ENGINEERING

THIRD SEMESTER

IE272 – METROLOGY AND INSPECTION

(REGULATIONS 2004)

5

Time: 3 hr Max Mark : 100

Answer ALL questions

Part – A (10 X 2 = 20 Marks)

1. Define Limits and Tolerance
2. Define Reliability
3. What are slip and Limit gauges?
4. What is Bevel Protractors?
5. What are the applications of form measurements?
6. State the advantages of LASER
7. When do we use Image Processing?
8. Define LASER Interferometer
9. Define Displacement. Give an Example
10. What is Torque Measurement?

PART – B (5 x 16 = 80 Marks)

11. Describe the types, principles, causes and errors in measurement?

12. (a) Explain the various Linear measurements used in Engineering Industry in detail?

OR

12. (b) Discuss the various Angular measurements used in Auto Ancillary units?

13. (a) Elaborate the principle and applications of measurements of screw thread and gears?

OR

13. (b) Discuss the procedure to measure the surface finish, straightness and roundness measurements?

14 (a) Explain the principle and applications of testing of machine tools using Laser interferometer?

OR

14. (b) Describe the types, constructional features and applications of CMM?

15 (a) Define Force Measurement. What are the characteristics of measuring devices? Explain the basic principles and concepts of temperature, pressure and Flow measurement?

OR

15. (b) Describe the destructive testing methods and NDT methods?