C 56253–A

Name.....

Reg. No.....

EIGHTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, JUNE 2009

ME 04 804 (B) – MAINTENANCE ENGINEERING

(2004 Admissions)

Time : Three Hours Maximum : 100 Marks

Part A

1. (a) Write a note on Performance trend monitoring.
   (b) Explain the types of Maintenance.
   (c) Explain Proximity analysis.
   (d) Explain transducer selection.
   (e) Explain any *two* analytical techniques used in Contaminant monitoring.
   (f) Explain Corrosion monitoring.
   (g) Define Reliability, MTBF and MTTF.
   (h) Show that the MTTF is reciprocal of a Constant hazard rate for an exponential Probability distribution for failure rate.

(8 × 5 = 40 marks)

Part B

2. (a) Explain the principles and methods used in Condition monitoring.

Or

   (b) Explain plant maintenance, breakdown maintenance and Preventive maintenance.

3. (a) Explain frequency and spectral analysis with an example.

Or

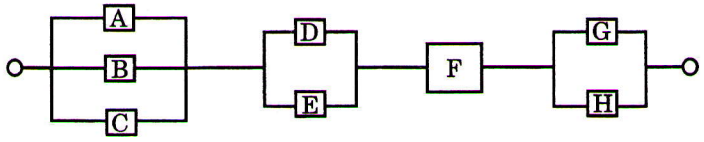
   (b) Explain in detail about any one method of condition. Monitoring of ball and roller bearings.

4. (a) Explain the working principle of NDT.

Or

   (b) Explain the Spectral oil analysis Procedure.

5. (a) Find the system reliability of the following system :



If reliability of each unit is 0.4

Or

   (b) Explain the bath tub curve and derive the formula for mean-life of the system.

(4 × 15 = 60 marks)