C 41285

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Name....................
Reg. No...................

SIXTH SEMESTER B.TECH. (ENGINEERING) DEGREE EXAMINATION, MAY 2013

ME/AM 09 L 03—INDUSTRIAL MAINTENANCE

(2009 Admission onwards)

Time : Three Hours   Maximum : 70 Marks

Part A

Answer all questions.
Each question carries 2 marks.

1. What is the purpose of maintenance ?

2. What is the use of accelerometer ?

3. What is known as Ferrography ?

4. Define non destructive testing.

5. Define Availability.

(5 × 2 = 10 marks)

Part B

Answer any four questions.
Each question carries 5 marks.

6. Discuss various maintenance strategies.

7. Explain in detail about proximity analysis.

8. Write short notes on acoustic intensity.

9. Explain corrosion monitoring process.

10. In a plant, it is necessary to have inherent availability of 0.9 MTBF of 200 h. What is the maximum possible MTTR ?

11. Explain : inherent and operational availability.

(4 × 5 = 20 marks)

Part C

Answer all questions.
Each question carries 10 marks.

12. (a) Explain the different types of maintenance in detail.

Or

(b) Describe the different methods of condition monitoring.

Turn over

13. (a) Explain with sketch the working principle of Type, Shear and Capacitive accelerometer.

Or

(b) Explain briefly the vibration signature analysis.

14. (a) Explain spectral oil analysis procedure with sketch.

Or

(b) With neat sketch explain the liquid penetrant testing method.

15. (a) Explain the equipment life cycle failure rate.

Or

(b) A mechanical pumping device has a constant failure rate of 0.023 failure per hour and an exponential repair time with a mean of 10 hr. If two pumps operate in an active redundant configuration, determine the system MTTF and the reliability that the system will operate without failure for 72 hr.

(4 × 10 = 40 marks)