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# EIGHTH SEMESTER B.TECH. (ENGINEERING) [2014 SCHEME] DEGREE EXAMINATION, APRIL 2018

## Mechanical Engineering

## ME 14 805 F—INDUSTRIAL MAINTENANCE

Time: Three Hours

Maximum: 100 Marks

### Part A

Answer any eight questions.

- 1. Discuss the objective of maintenance.
- 2. Briefly explain the predictive maintenance.
- 3. Elucidate the advantages of condition monitoring technique.
- 4. Confer the working principle of FFT analyzer.
- 5. Describe the various types of accelerometer used in vibration monitoring system.
- 6. Briefly explain the working principle of shock pulse machine.
- 7. Discuss the various resistance techniques used in condition monitoring.
- 8. Elucidate the spectral oil analysis procedure.
- 9. Confer the term maintainability
- (i) Maintenance budget.

10. Write short notes on:

(2.5 marks)

(ii) Reliability.

(2.5 marks)

 $[8 \times 5 = 40 \text{ marks}]$ 

#### Part B

11. Discuss the various steps involved in preventive maintenance.

Or

- 12. Confer the process involved in condition monitoring. And also explain off-load testing used in condition monitoring with its flow chart.
- 13. Explain the working principle of frequency analyzer in vibration monitoring system. Mention its application, advantages and disadvantages.

14. Describe the working principle of	of proximity	analyzer in	vibration	monitoring s	ystem.	Mention its
application, advantages and dis						

15. Draw a diagram of stationary anode x-ray illustrates and explains different parts.

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- 16. With neat sketch explain the liquid penetrant testing.
- · 17. Derive the expression for Mean Time To Failure (MTTF).

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Or

Comment of the same

18. What do you mean by maintenance job planning? Discuss various steps of maintenance job planning.

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 $(4 \times 15 = 60 \text{ marks})$ 

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