

Reg No.: _____

Name: _____

APJ ABDUL KALAM TECHNOLOGICAL UNIVERSITY
SIXTH SEMESTER B.TECH DEGREE EXAMINATION, APRIL 2018

Course Code: ME376
Course Name: MAINTENANCE ENGINEERING

Max. Marks: 100

Duration: 3 Hours

PART A

Answer any three full questions, each carries 10 marks.

Marks

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|---|----|--|-----|
| 1 | a) | Explain the maintenance functions. | (8) |
| | b) | Compare quality and reliability. | (2) |
| 2 | a) | What is maintainability and how the maintainability is improved? | (6) |
| | b) | Illustrate failure mode with a Bath Tub curve. | (4) |
| 3 | a) | Explain Reliability of series, parallel and standby systems with examples. | (6) |
| | b) | Compare online and offline Condition Monitoring. | (4) |
| 4 | a) | Explain the procedure of Preventive Maintenance. | (5) |
| | b) | Illustrate the thickness measurement by using LVDT. | (5) |

PART B

Answer any three full questions, each carries 10 marks.

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|---|----|--|-----|
| 5 | a) | Explain the causes of vibration in machines | (5) |
| | b) | Illustrate the working of vibration holograph | (5) |
| 6 | a) | Explain Radiography testing of cracks in solid materials | (6) |
| | b) | Write short notes on infrared spectroscopy | (4) |
| 7 | a) | Explain the lubricant monitoring by ferrography. | (5) |
| | b) | Explain the process of Reliability Centred Maintenance. | (5) |
| 8 | a) | Explain the process of Root Cause Analysis. | (6) |
| | b) | Enumerate the causes of failure of machine elements | (4) |

PART C

Answer any four full questions, each carries 10 marks.

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| 9 | a) | Explain terotechnology process and it features. | (7) |
| | b) | Enumerate the features of TPM. | (3) |
| 10 | a) | Explain the zero maintenance concept. | (5) |
| | b) | Explain how the performance of maintenance is measured. | (5) |

- 11 a) Explain the important factors for the success of Business Centred Maintenance. (5)
- b) Write short notes on Quality Assured Maintenance. (5)
- 12 a) Prepare a sample of maintenance plan and schedule of a work shop. (6)
- b) Enumerate the objective of manpower planning. (4)
- 13 a) Describe the procedure of maintenance planning with a flow chart. (6)
- b) Explain the applications of computer in maintenance planning. (4)
- 14 a) Explain the structure of Functional Maintenance Organisation. (5)
- b) Explain Maintenance Cost Analysis. (5)
