

(Following Paper ID and Roll No. to be filled in your Answer Books)

Paper ID : 187852

Roll No.

B.TECH.

Theory Examination (Semester-VIII) 2015-16

**MAINTENANCE ENGINEERING & MANAGEMENT**

Time : 3 Hours

Max. Marks : 100

**Q1. Attempt all questions.**

(2×10=20)

- (a) What are the benefits of sound maintenance system?
- (b) What are the sources of maintenance cost?
- (c) Differentiate brake down and preventive maintenance.
- (d) What is meant by risk based maintenance
- (e) How to analyse the vibration?
- (f) Why the temperature monitoring is necessary?
- (g) What are the repair methods for bearing and slide ways

- (h) How to maintain broken lead screw?
- (i) Name the hydraulic equipment used in material handling purpose?
- (j) What are the uses of computer in maintenance?

2. Attempt any five parts. (5×10=50)

- (a) A sample of 10 electronic components was tested. The times to failure for first four components to fail were 1900, 2650, 2810 and 2820 hours. respectively. The test was terminated at 3000 hours. There was no replacement of failed units and the remaining 6 units were functioning properly at the time of termination and determine total test time and estimated MTTF.
- (b) Describe the monitoring techniques used for ascertaining the physical condition of an equipment.
- (c) Describe the role of maintenance planning in maintenance function.
- (d) Briefly explain the impact of planning in the manpower utilization of maintenance organization.
- (e) How will you carry out Hazard Analysis for a chemical industry? Explain.

(2)

- (f) Write short note on Spare parts management techniques used in industry.
- (g) Explain briefly different types and classes of maintenance cost.
- (h) Explain the logical fault location methods. .

Q3. Attempt any two parts. (2×15=30)

- (a) Illustrate the basic model of optimum reliability determination with total cost as determining factor using designing for reliability. Also give suitable example for investment in reliability with reference to above model.
- (b) Explain the repair methods for crane and hydraulic lift.?
- (c) Explain the maintenance procedure for various small equipment for material handling purpose like chain block, chain, rope, trolley and R.G.B.

(3)