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B.E / B.Tech ( Full Time ) DEGREE END SEMESTER EXAMINATIONS, NOV / DEC 2012

Manufacturing Engineering

VIII Semester

MF 9029 TOTAL PRODUCTIVE MAINTENANCE

(Regulation 2008)

Time : 3 Hours

Answer ALL Questions

Max. Marks 100

**PART-A (10 x 2 = 20 Marks)**

1. At are the objectives of maintenance?
2. What are the areas of Tero technology?
3. When is minimal repair policy used?
4. What are the different types of replacement models?
5. How are Zero Defects and TPM related?
6. How does TPM lead to reduced inventory?
7. How does 'Equipment Ownership' influence maintenance?
8. What are the contents of 'maintenance manuals'?
9. What is the role of condition monitoring in preventive maintenance?
10. What is the most commonly used method of condition monitoring for rotating parts?

**Part – B (5 x 16 = 80 marks)**

11. a) Discuss Reliability Centered Maintenance (RCM) in detail. What is the significance of RCM today? (8)  
b) What are the different types of maintenance costs? Discuss them in detail. (8)
12. a) What are the different types of maintenance? What is the significance of TPM today?  

**OR**

b) What are the activities of preventive maintenance? What are the reasons for choosing preventive maintenance?
13. a) How does TPM help in maximizing equipment effectiveness? How is overall equipment effectiveness calculated?  

**OR**

b) What are the Steps to start TPM in an organization? Discuss these steps in detail with examples.
14. a) Discuss various maintenance staffing methods with examples. How to determine the optimum maintenance staffing level?

**OR**

b) How is simulation used for maintenance activities? What are the inputs? How is the simulation method different from other techniques?

15. a) Discuss the application of wear debris monitoring. What are the steps involved? What are the successes achieved using this method?

**OR**

b) What is Maintenance Management Information System? What are the reports produced by this system? How is it integrated to other information systems?