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**REG NO:**

**SIR ISSAC NEWTON COLLEGE OF ENGINEERING AND TECHNOLOGY**  
Mechanical Engineering  
**ME 6012-MAINTENANCE ENGINEERING**  
Time : Three hours Maximum : 100 Marks

Answer ALL questions  
**PART A — (10 × 2 = 20 Marks)**

1) What are the objectives of maintenance?

2) Define reliability.

3) What is meant by planned maintenance approach?

4) Why do you need lubrication?

5) Explain the role of condition monitoring?

6) Describe briefly pistol thermometer.

7) What are called age dependent failures?

8) What are the benefits of fault tree diagram?

9) Define CMMS.

10) State the role of equipment records in maintenance.

**PART B — (5 × 16 = 80 Marks)**

11. (a)What are the objectives of maintenance organization and what are the different types of organizations?(16 Marks)

**(OR)**

(b)(i)What are the objectives and principles of planned maintenance activity?(8Marks)

(ii) Explain maintenance economics.

12. (a)Explain the principles and methods of lubrication in detail.(16 Marks)

**(OR)**

(b)(i) Explain the repair cycle (6Marks)

(ii) What are all the steps involved in preventive maintenance.(10Marks)

13. (a)Explain on load testing and off load testing in detail.(16marks)

**(OR)**

(b) What is wear debris analysis? What are the wear debris analysis techniques commonly used and compare performance and uses? (16Marks)

14. (a)Briefly explain the repair methods of machine beds.(16Marks)

**(OR)**

(b) Explain the logical fault location methods.(16Marks)

15.(a)Explain the repair methods for crane and hydraulic lift.(16 Marks)

**(OR)**

(b)(i) Briefly explain the equipment record. (8 Marks)

(ii) Explain briefly the use of computers in maintenance. (8Marks)

**SINCET/IV MECH/MODEL/ OCT-NOV 2016/ME6012/SET-1//AU-MJ 2014//**