

**M.Tech. 3rd Semester (CBCS Scheme)**

**Examination, December-2018**

**MECHANICAL ENGG**

**Paper- 16MME 23C1**

**Tribology And Maintenance Engg.**

*Time allowed : 3 hours]*

*[Maximum marks : 100*

*Note: Question one is compulsory and attempt one question from each unit.*

1. (a) Explain various important properties of lubricant. 5
- (b) What is Topography? 5
- (c) Give important properties of lubricants. 5
- (d) Planned and unplanned maintenance. 5

**Unit-I**

2. Explain tribological system and their characteristic features. Explain one system in detail. 20
3. What are the causes of Friction? State and explain adhesion theory of Friction with suitable diagrams. 20

**Unit-II**

4. Write short note on following: 20
- (a) Mechanism of wear.
- (b) Corrosion wear
- (c) Engineering reliability
- (d) CBM

5. What are the sources and causes of wear and effect of wear on properties of metals? 20

**Unit-III**

6. Explain the objectives of maintenance management; maintenance objectives and costs; quality and quantity circle in maintenance. <http://haryanapapers.com> 20
7. What are the general requirements of bearing materials? Classification and mechanism of wear; quantitative laws of wear; stick Regime; fretting wear. 20

**Unit-IV**

8. Classification of bearings 20
- (a) Hydrostatic bearings.
- (b) Hydrodynamic bearings.
- (c) Mechanism of elastohydrodynamic lubrication
9. What are the general requirements of bearing materials? What do you mean by POROUS bearings? 20