

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