

Roll No.

Printed Pages : 2

36041**BT-6 / M-18****TRIBOLOGY****Paper-ME-304-E***Time allowed : 3 hours]**[Maximum marks : 100**Note:- Attempt any five questions by selecting at least one question from each unit.***Unit-I**

1. (a) What is tribology? Discuss its importance and industrial significance. 10
- (b) What do you mean by surface texture? Describe the various methods to measure it. 10
2. What is friction? Describe laws of sliding friction and rolling friction. Explain Bowden & Tabor's simple theory of friction. Also list the inadequacies of this theory. 20

Unit-II

3. Define wear? What are various types of wear? Discuss in detail about fatigue wear. 20
4. (a) Describe the various methods to measure wear. 10
- (b) What are wear resistance materials? Explain in detail. What are applications of such materials? 10

Unit-III

5. Discuss the various regimes of lubrication based on surface topography. 20

36041

[Turn over

(2)

6. (a) Discuss the mechanism of pressure development in hydrodynamic lubrication. 10
- (b) What are desired properties of a good lubricant? 5
- (c) What are lubricant additives? What are their advantages? 5

Unit-IV

7. Derive Reynold's equation in 2-D stating all the assumptions made. What is importance of this equation in field of tribology? 20
8. (a) Derive requisite equation for load carrying capacity of hydrostatic step bearing in terms of supply inlet pressure, inner and outer radii. 10
- (b) How would you describe the suitability of a particular bearing type for a given situation? Explain. 10

www.kuonline.in**Whatsapp @ 9300930012****Your old paper & get 10/-****Paytm or Google Pay****36041**