

Roll No.

Total No. of Pages : 01

Total No. of Questions : 08

M.Tech. (ME) (Sem-2)

**TRIBOLOGY**

Subject Code : MTME-202

M.Code : 74978

Date of Examination : 12-06-2023

Time : 3 Hrs.

Max. Marks : 100

**INSTRUCTIONS TO CANDIDATES :**

1. Attempt any FIVE questions in all, out of EIGHT questions.
2. Each question carries TWENTY marks.

1. a) Discuss the laws of friction. (5)  
b) Discuss the characteristics of friction in metals and non-metals. (15)
2. a) What do you mean by cost of friction and wear in tribology? (10)  
b) Discuss in brief elasto, hydrodynamic lubrication using suitable diagram. (10)
3. Discuss the basic working principle, operation and general selection criteria for bearings in tribology. (20)
4. Discuss the significance of tribology in excavation in mining and also explain the application of tribology in mining industry. (20)
5. a) Discuss how friction effects wear in polymers? (5)  
b) Discuss measurement of friction and explain in brief types of wear. (15)
6. Discuss, in brief about introduction of solid lubricants and their applications. (20)
7. a) Explain what is Sommar-field number? (5)  
b) Discuss the role of clearance and minimum film thickness in journal bearing. (15)
8. Discuss the application of industrial tribology with respect to paper and glass fibre industry. (20)

**NOTE is closure of identity by writing mobile number or making passing request on any page of Answer sheet will lead to UMC case against the Student.**