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M.Tech.(PE) (E-I) (Sem.-2)
INDUSTRIAL TRIBOLOGY

Subject Code : PE-512 Paper ID : [E0449]

Time: 3 Hrs. Max. Marks: 100

INSTRUCTION TO CANDIDATES:

- 1. Attempt any FIVE questions out of EIGHT questions.
- 2. Each question carries TWENTY marks.
- Q1 a) What is the role of friction in Tribology?
 - b) Explain in detail surface energy and flash temperature theory.
- Q2 a) Discuss the concept of adhesion in friction.
 - b) Explain how measurement of friction is done.
- Q3 a) Explain different types of wear.
 - b) What do you mean by wear of cutting tool and dies? Discuss.
- Q4 a) Discuss the Mechanism of lubrication.
 - b) Write applications of solid lubricants.
- Q5 Discuss in detail the concept of minimum film thickness and turbulence in oil bearing.
- Q6 Discuss the significance of Reynold's slip in rolling friction.
- Q7 Discuss the concept of bearing Hydrostatic and Dynamic.
- Q8 Explain how wear and friction is prevented and controlled in machines.

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