

Roll No.

Total No. of Pages : 02

Total No. of Questions : 09

B.Tech.(ME) (2011 Onwards E-II) (Sem.-7,8)

INDUSTRIAL TRIBOLOGY

Subject Code : DE/ME-3.6

M.Code : 72022

Time : 3 Hrs.

Max. Marks : 60

INSTRUCTION TO CANDIDATES :

1. SECTION-A is COMPULSORY consisting of TEN questions carrying TWO marks each.
2. SECTION-B contains FIVE questions carrying FIVE marks each and students have to attempt any FOUR questions.
3. SECTION-C contains THREE questions carrying TEN marks each and students have to attempt any TWO questions.

SECTION-A

1. Answer briefly :

- (a) What is concept of friction in Industrial Tribology?
- (b) Define the laws of static friction.
- (c) Define a Smooth Surface.
- (d) What is the role of filters in lubricants?
- (e) Give differences between friction and wear.
- (f) What is Lubricant Additives?
- (g) What do you mean by boundary lubrication?
- (h) Discuss the different nature of surfaces and their contact.
- (i) Explain the laws of rolling friction.
- (j) How friction measurement is done?

SECTION-B

2. Explain the concept of hydrostatic and elasto hydrodynamic lubrication.
3. Explain physical and mechanical properties of surface layers.
4. Explain the factors for selecting bearing in tribological component.
5. Explain the major causes of friction in metals and non-metals.
6. Explain with suitable diagram the mechanism of wear.

SECTION-C

7. Discuss in details the methods of studying different surfaces.
8. Discuss the steps performed in diagnostic maintenance of tribological components.
9. Discuss in detail the properties of liquid and grease lubricants.

NOTE : Disclosure of Identity by writing Mobile No. or Making of passing request on any page of Answer Sheet will lead to UMC against the Student.