

Total No. of Questions : 12]

May - June - 2012

SEAT No. :

P1346

[Total No. of Pages : 4

[4164] - 437

B.E. (Mechanical)

TRIBOLOGY

(2008 Pattern) (Sem. - I) (Elective-I)

Time : 3 Hours]

[Max. Marks : 100

Instructions to the candidates :-

- 1) Answers to the two sections should be written in separate books.
- 2) Neat diagrams must be drawn wherever necessary.
- 3) Figures to the right indicate full marks.
- 4) Use of logarithmic tables slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.
- 5) Assume suitable data, if necessary.

SECTION - I

Unit - I

- Q1) a) Explain the effect of temperature and pressure on the viscosity of lubricating oil. [6]
- b) What do you mean by Tribology? Explain the importance of Tribology in industry. [6]
- c) State the different ways of the disposal of used oils. [4]

OR

- Q2) a) Explain the following properties of lubricants in brief: [8]
- | | |
|-----------------|---------------------|
| i) Viscosity | ii) Viscosity Index |
| iii) Alkalinity | iv) Demulsibility |
- b) Discuss and classify sliding contact bearing. [8]

Unit - II

- Q3) a) What is meant by Abrasive wear? Deduce the equation for volume of abrasive wear per unit sliding distance with conical abrasive particles. [8]
- b) Explain the friction measurement using Pin on disk method. [4]
- c) Explain the following terms : [4]
- | | |
|-------------------------|-------------------------------|
| i) Real area of contact | ii) Apparent area of contact. |
|-------------------------|-------------------------------|

OR

P.T.O.

