May - June - 2012

Total No. of Questions : 12]

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.*

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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.