

Nov-Dec  
2010

Total No. of Questions—12]

[Total No. of Printed Pages—7

**[3862]-111**

**S.E. (Mechanical)(First Semester) EXAMINATION, 2010**

**APPLIED THERMODYNAMICS**

**(2008 COURSE)**

**Time : Three Hours**

**Maximum Marks : 100**

- N.B. :—**
- (i) Answer *three* questions from each Section.
  - (ii) Answers to the two Sections should be written in separate answer-books.
  - (iii) Neat diagrams must be drawn wherever necessary.
  - (iv) Figures to the right indicate full marks.
  - (v) Use of logarithmic tables, slide rule, Mollier charts, electronic pocket calculator and steam tables is allowed.
  - (vi) Assume suitable data, if necessary.

**SECTION I**

1. (a) Obtain an expression for entropy change in the form :

$$S_2 - S_1 = c_p \ln \frac{T_2}{T_1} - R \ln \frac{P_2}{P_1} \quad [8]$$

- (b) What are statements of second law of thermodynamics ?  
How is second law applicable to compressors and air receiver tanks ?

[8]

P.T.O.



