

May- June- 2011

Total No. of Questions—12]

[Total No. of Printed Pages—4+1

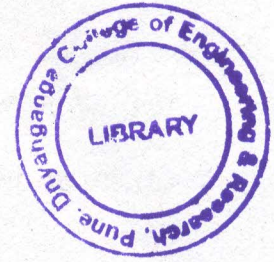
[3962]-111

S.E. (Mechanical) (First Semester)

EXAMINATION, 2011

APPLIED THERMODYNAMICS

(2008 PATTERN)



Time : Three Hours

Maximum Marks : 100

- N.B. :-** (i) Answer any *three* questions from section I and any *three* questions from Section II
- (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 Steam table, Mollier chart and calculator is allowed.
- (vi) Assume suitable data, if necessary.

SECTION I

1. (a) What are limitations of first law of thermodynamics ? How does second law overcome these limitations ? [6]
- (b) What is C.O.P. ? How will you calculate COP for a refrigerator and heat pump ? [4]
- (c) Obtain expression $S_2 - S_1 = C_v \ln \frac{T_2}{T_1} + R \ln \frac{V_2}{V_1}$. [6]

P.T.O.

