

Nov-Dec
2010

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[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.



