

Total No. of Questions—12]

[Total No. of Printed Pages—8+4+1

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S.E. (Computer Engg.) (I Sem.)

(Common to IT) EXAMINATION, 2009

DISCRETE STRUCTURES

(2008 COURSE)

Time : Three Hours

Maximum Marks : 100

N.B. :— (i) Answers to the two Sections should be written in separate answer books.

(ii) Neat diagrams must be drawn wherever necessary.

(iii) Assume suitable data, if necessary.

SECTION I

1. (a) Show that :

(i) $(p \wedge (\sim p \vee q)) \vee (q \wedge \sim(p \wedge q))$ is equivalent to q .

(ii) $((p \vee \sim q) \wedge (\sim p \vee \sim q)) \vee q$ is a tautology. [8]

(b) The converse of statements is given. Write inverse and contrapositive statements :

(i) If he is considerate of others, then a man is a gentleman.

(ii) If a steel rod is stretcher, then it has been heated. [4]

P.T.O.

