

✓ May - June 2012

Total No. of Questions—12]

[Total No. of Printed Pages—8+2

Seat No.	
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[4162]-201

S.E. (Comp + IT) (First Semester) EXAMINATION, 2012

DISCRETE STRUCTURES

(2008 PATTERN)

Time : Three Hours

Maximum Marks : 100

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

(ii) Attempt from Section I Q. No. 1 or Q. No. 2, Q. No. 3 or Q. No. 4, Q. No. 5 or Q. No. 6.

(iii) Attempt from Section II Q. No. 7 or Q. No. 8, Q. No. 9 or Q. No. 10, Q. No. 11 or Q. No. 12.

(iv) Neat diagrams must be drawn wherever necessary.

(v) Figures to the right indicate full marks.

(vi) Assume suitable data, if necessary.



SECTION I

1. (a) Use mathematical induction to show that : [6]

$$\frac{1}{1.2} + \frac{1}{2.3} + \frac{1}{3.4} + \dots + \frac{1}{n(n+1)} = \frac{n}{n+1} \text{ for all } n \geq 1.$$

(b) Consider the following :

p : This system is good

q : This system is cheap

P.T.O.

