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S.E. (Comp. Engg.) (I Sem.) (Common to IT)

EXAMINATION, 2009

DIGITAL ELECTRONICS AND LOGIC DESIGN

(2008 COURSE)

Time : Three Hours

Maximum Marks : 100

N.B. :— (i) Answer questions 1 or 2, 3 or 4, 5 or 6 from Section I and questions 7 or 8, 9 or 10, 11 or 12 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) Assume suitable data, if necessary.

SECTION I

1. (a) What will be the Excess-3 code of any given 4-bit grey code number ? Show the truth table. [6]

(b) Express the following numbers in binary. Show your step by step equations and calculations : [6]

(i) $(1010.11)_{\text{Decimal}}$

(ii) $(428.10)_{\text{Decimal}}$

(c) Perform the following Hexadecimal subtraction and show your answer in Hexadecimal only : [6]

(i) $(387)_{\text{Hex}} - (2AC)_{\text{Hex}}$

(ii) $(587)_{\text{Hex}} - (4EB)_{\text{Hex}}$

P.T.O.

