May - June 2010

Total No. of Questions—12] [Total No. of Printed Pages—4

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S.E. (Comp.) (First Semester) EXAMINATION, 2010

DIGITAL ELECTRONICS AND LOGIC DESIGN

(2008 COURSE)

Time : Three Hours **Maximum Marks : 100**

N.B. :—(*i*) Answer Q. No. **1** *or* **2**, Q. No. **3** *or* **4**, Q. No. **5** *or* **6** from Section I and answer Q No. **7** or **8**, Q. No. **9** *or* **10**, Q. No. **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*) Convert the following octal numbers into its equivalent decimal and hex. : [6]

(*i*) $(555)_{octal}$

(*ii*) $(777)_{octal}$.

(*b*) Solve the following equations using corresponding minimization techniques, also draw MSI design for the minimized output equation :

(*i*) $Z = f\ (A, B, C, D) = \pi\ (2, 7, 8, 10, 11, 13, 15)$

(*ii*) $Z = f\ (A, B, C, D) = \Sigma\ (0, 3, 4, 9, 10, 12, 14)$. [12]

P.T.O.