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| G:\nsu-logo.png  **North South University**  Department of Electrical & Computer Engineering    **LAB REPORT**  Course Name: **CSE231L**  Experiment No:     |  | | --- | | Experiment Name: |   Experiment Date:  Report Submission Date:  Section: | |
| Student Name: | Score |
| Student ID: |  |
| Remarks: |

**LAB-04: Combinational Logic Design (BCD to Excess-3 Converter)**

**Objectives:**

**Equipment list:**

**Theory:**

1. **Map:**

**BCD to Excess-3**

**Circuit Diagrams:**

**Figure F1: Minimal logic circuit of BCD to Excess-3 converter.**

**Figure F2: Minimal universal gate implementation of BCD to Excess-3 converter.**

**Figure F4: minimal IC implementation of BCD to Excess-3 converter.**

**Figure F3: K-Maps.**

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**A = B =**

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**C = D =**

**Data Table:**

**Table 01: Truth table of the given circuit using universal gates**

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| **Decimal Digit** | **Binary Coded Decimal (BCD)** | | | | **EXCESS-3** | | | | |
| **W** | **X** | **Y** | **Z** | **A** | **B** | **C** | **D** |
| **0** |  |  |  |  |  |  |  |  |
| **1** |  |  |  |  |  |  |  |  |
| **2** |  |  |  |  |  |  |  |  |
| **3** |  |  |  |  |  |  |  |  |
| **4** |  |  |  |  |  |  |  |  |
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**Discussion:**