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**COE 200, Term 023
Fundamentals of Computer Engineering**

Quiz# 4

Date: Monday, July 28, 2003

Q.1. You are required to design a combinational circuit that computes the remainder of dividing a 4-bit number $N_3N_2N_1N_0$ by 3. For example, the remainder of dividing the number 1010 by 3 is 01 and the remainder of dividing the number 0101 by 3 is 10.

- a. Derive the truth table showing the relation between inputs and outputs
- b. Derive simplified sum of products expressions for the outputs.