EC 2.101 - Digital Systems and Microcontrollers

Practice Sheet 3 (Lec 1 – Lec 17)

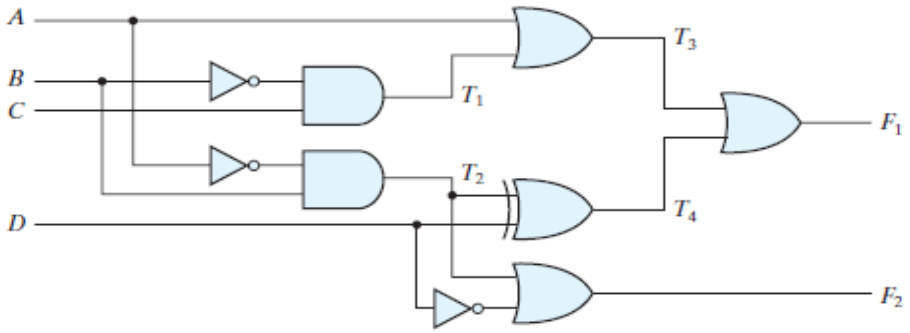
Q1. Design a combinatorial circuit for

a. Binary-to-Gray converter
b. Gray-to-Binary converter

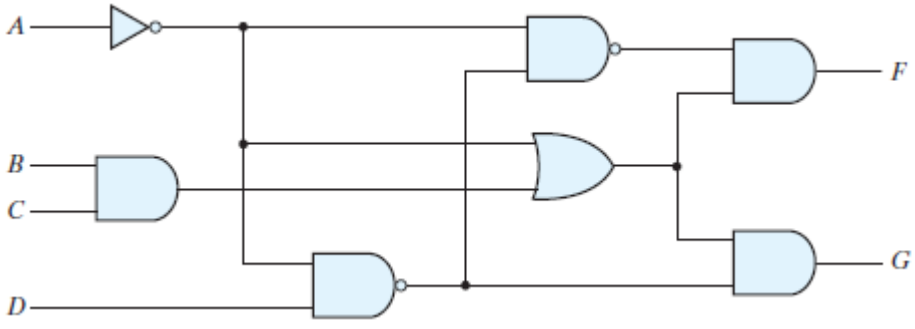
Note: Gray code/ reflected binary code (RBC), is an ordering of the binary numeral system such that two successive values differ in only one bit (binary digit).

Q2. Obtain the Simplified Boolean Expressions for the following outputs

a.



b.



Q3. Given 4-bit input message, design a circuit that generates:

a. Even parity bit
b. Odd parity bit