**ECE 329**

**Digital Circuit Design II + Lab.**

**Fall 2018/2019**

**LAB # 11**

**17.12.2018**

**Objective:**

To specialize about Complementary Metal Oxide Semiconductor (CMOS) Logic.

1. **Solving problems with the CMOS Logic**
2. **Perform the following task on ORCAD by CMOS Logic.**

**Tasks:**

1. Design a CMOS logic gate that performs XOR operation.
2. Design a CMOS logic gate that performs ABC operation.
3. Design a CMOS logic gate that performs A+B+C operation.
4. Design a CMOS logic gate that performs 3 input XOR operations.
5. Design a CMOS logic gate that performs A(B+CD) operation

Take home quiz

F(A,B,C)= ∑(3,5)

1. Make the truth table(10 pts)
2. Make K-Map and define functions (20 pts)
3. Design a CMOS logic gate that performs the functions found on 2.
4. Design and simulate your CMOS logic gate that you found on part 3 with true timing.