

ECE 223 LAB EXPERIMENT 6

Preparation Part:

- 1) Design a logic circuit with 4 inputs x, y, z, w and 1 output f . If binary input equals 2,4,6,8,11,12,13,14,15 binary output equals 1; if binary input equals 3,5,7,9,10 binary output equals zero; and otherwise(don't care situations) not important. For the circuit you have designed write the explicit expressions using Karnaugh map, implement the function using minimum number of NOR gates.
- 2) Design a logic circuit with 4 inputs x, y, z, w and 1 output f . If binary input equals 2,4,6,8,11,12,13,14,15 binary output equals 1; if binary input equals 3,5,7,9 binary output equals zero; and otherwise(don't care situations) not important. For the circuit you have designed write the explicit expressions using Karnaugh map, implement the function using minimum number of NOR gates.

Experiment Part:

- 1) Set up the logic circuit in part 2.

Good luck 😊