UNIVERSITY OF CALIFORNIA, RIVERSIDE

Department of Computer Science and Engineering

Department of Electrical Engineering

CS/EE120A – Logic Design

Homework 2

Given May 7, Due May 14, 2001

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1. Use the tabulation method to simplify the function $f(w,x,y,z) = \Sigma(0,2,5,7,13,15)$. List all the PI's, EPI's, cover lists, and solutions. (4)

2. Use only 2-to-1 multiplexers to implement the function $f(w,x,y,z) = \Sigma(0,2,5,7,13,15)$. Do not simplify it. (4)

3. Use VHDL to design an 8-bit wide tri-state buffer. (4)

4. Use basic gates to design a 3-to-8 decoder. (4)