Cal Poly Pomona
ECE Dept.

ECE 2300L **Lab # 9** **Dr. Rafi**

Prelab

Design the following nonbinary sequence counter with the sequence 0, 1, 2, 4, 5, 6, 7, and repeat. Use T flip-flops. Draw the state diagram, state table, and the schematic. Is the counter self-correcting? Justify your answer.

Lab

Implement the above circuit using a minimum number of chips. Demonstrate the Lab using switches, flip-flops, and seven-segment displays as needed.

POSTLab

1. Is T flip-flop commercially available? If so, draw the pin assignments from the Internet. If not, draw block diagrams for obtaining T-ff in two ways.
2. How many flip-flops are needed to design a counter to count in the following sequence: 12, 20, 1, 0, and then repeat?