Cpr E 281 LAB10 ELECTRICAL AND COMPUTER ENGINEERING IOWA STATE UNIVERSITY

Lab 10 Answer Sheet

Lab Section:_____

Date:
PRELAB:
Refer to Chapter 5 in your textbook and the lab instructions to complete your pre-lab. Please read all the material and complete the circuit diagrams before you come to the lab.
Q1. Draw the circuit diagram for the 4-bit Shift Register using D flip-flops in the space below.
Q2. Draw the circuit diagram for the 4-bit Synchronous Up-Counter using D flip-flops in the space below.

Name & Std No.:_____

Cpr E 281 LAB10 ELECTRICAL AND COMPUTER ENGINEERING IOWA STATE UNIVERSITY

Lab 10 Answer Sheet

Q3.	Oraw the circuit diagram for the 4-bit Synchronous Up-Counter using T flip-flops in
the	pace below.

Q4. Draw the circuit diagram for the 4-bit **Asynchronous Up-Counter** using T flip-flops in the space below.

Cpr E 281 LAB10 ELECTRICAL AND COMPUTER ENGINEERING IOWA STATE UNIVERSITY

Lab 10 Answer Sheet

Q5. Draw the circuit diagram for the 4-bit **Asynchronous Down-Counter** using T flip-flops in the space below.

LAB:

2.0 Fill in the sequence table below. Watch out for switch bouncing!

In	Q1	Q2	Q3	Q4
t0 = 1				
t1 = 0				
t2 = 1				
t3 = 1				
t4 = 1				
t5 = 0				
t6 = 0				
t7 = 0				



Lab 10 Answer Sheet

Hardware results demonstrate a good circuit. TA Initials:	
3.1 Hardware results demonstrate a good circuit. (D flip-flops) TA Initials:	
Handware results demonstrate a good singuit (Tillia flags) TA Initials.	
Hardware results demonstrate a good circuit. (T flip-flops) TA Initials:	
3.2 Seven segment shows 0 to F. (UP) TA Initials:	
Seven-segment display shows F to 0. (DOWN) TA Initials:	