

Today, Nov. 25th, we have learned :

Chapter 6 NumRegisters and Counters

6.1 Registers 255

You should master:

*D-type Registers, T-type registers and JK-type Registers
their Characteristic equations, especially the JK-type Registers*

6.2 Shift Registers 258

*You should know the working principle of Shift Registers page 256~258 FIGURE 6.1~6.2
Understand the working principle of serial adder page 262~264 , FIGURE 6.5~6.6*

6.3 Ripple Counters 266

*Understand the working principle of Four-bit binary ripple counter on page 268, FIGURE 6.8
Understand the working principle of BCD ripple counter on page 270, FIGURE 6.10*

6.4 Synchronous Counters 271

Understand the working principle of:

Four-bit synchronous binary counter, FIGURE 6.12

Four - bit up -down binary counter, FIGURE 6.13 ,on page 273~274

6.5 Other Counters 278

*Understand the working principle of Four - bit binary counter with parallel load, FIGURE 6.14
on page 277*

Understand the working principle of Counter with unused states, FIGURE 6.16 on page 280

Very important !! Understand the designing procedure :

state transfer diagram -> state table -> K-map-> equation -> circuit

state table -> state transfer diagram

Home works:

For all homework in this Chapter, we do not consider any HDL !!!

In the 5th Edition text book, go to page 291~293, please finish the following questions:

6.6, 6.10, 6.16, 6.19, 6.27