

作业纸

课程名称: _____

班级: _____

教学班级: _____

姓名: _____

学号: _____

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1. $CP_1 = CP_2 = CP_3 = CP$ 同步

$$J_1 = K_1 = \bar{Q}_3$$

$$J_2 = K_2 = Q_1$$

$$J_3 = Q_1 Q_2, K_3 = Q_3$$

$$Q^{n+1} = J \bar{Q}^n + \bar{K} Q^n$$

$$Q_1^{n+1} = \bar{Q}_3^n \bar{Q}_1^n + Q_3^n Q_1^n$$

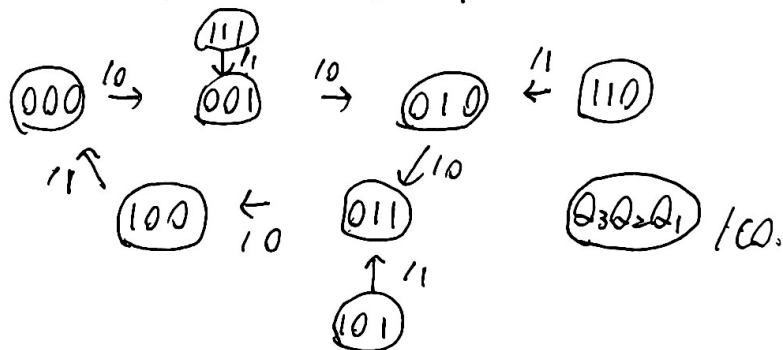
$$Q_2^{n+1} = Q_1^n \bar{Q}_2^n + \bar{Q}_1^n Q_2^n$$

$$Q_3^{n+1} = Q_1^n Q_2^n \bar{Q}_3^n + \bar{Q}_3^n Q_3^n$$

$$Q_3^{n+1} = Q_1^n Q_2^n \bar{Q}_3^n + \bar{Q}_3^n Q_3^n$$

$$CO = Q_3$$

Q_3^n	Q_2^n	Q_1^n	Q_3^{n+1}	Q_2^{n+1}	Q_1^{n+1}
0	0	0	0	0	1
0	0	1	0	1	0
0	1	0	0	1	1
0	1	1	1	0	0
1	0	0	0	0	0
1	0	1	0	1	1
1	1	0	0	1	0
1	1	1	0	0	1



能自启动的同步五进制计数器。

联系方式: _____



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2. $CP_0 = CP \downarrow$

$CP_1 = \bar{Q}_0 \downarrow = Q_0 \uparrow$ 异步

$CP_2 = Q_1 \uparrow$

$CP_3 = Q_0 \uparrow$

~~$J_1 = \bar{Q}_2 \bar{Q}_3 = Q_2 + Q_3$~~

~~$K_1 = 1$~~

$J_0 = K_0 = 1, CP \downarrow$

$\begin{cases} J_1 = \bar{Q}_2 \bar{Q}_3 = Q_2 + Q_3, Q_0 \uparrow \\ K_1 = 1 \end{cases}$

$\begin{cases} J_2 = 1 \\ K_2 = 1 \end{cases}, Q_1 \uparrow$

$\begin{cases} J_3 = \bar{Q}_1 \bar{Q}_2, Q_0 \uparrow \\ K_3 = 1 \end{cases}$

$CO = \bar{Q}_0 \bar{Q}_1 \bar{Q}_2 \bar{Q}_3$

Q_3^n	Q_2^n	Q_1^n	Q_0^n	Q_3^{n+1}	Q_2^{n+1}	Q_1^{n+1}	Q_0^{n+1}		
0	0	0	0	1	0	0	1	0010	0001
1	0	0	1	1	0	0	0	0001	0000
1	0	0	0	0	1	1	1	1010	0001
0	1	1	1	0	1	1	0	1011	1010
0	1	1	0	0	1	0	1	1100	0011
0	1	0	1	0	1	0	0	1101	1100
0	1	0	0	0	0	1	1	1110	0101
0	0	1	1	0	0	1	0	1111	1110

$Q^{n+1} = J\bar{Q}^n + \bar{K}Q^n$

$Q_0^{n+1} = \bar{Q}_0^n$

$CP \downarrow$

$Q_1^{n+1} = Q_2^n \bar{Q}_1^n + Q_3^n \bar{Q}_1^n$

$Q_0 \uparrow$

$Q_2^{n+1} = \bar{Q}_2^n$

$Q_1 \uparrow$

$Q_3^{n+1} = \bar{Q}_1^n \bar{Q}_2^n \bar{Q}_3^n$

$Q_0 \uparrow$

能自启动的异步十进制减法计数器。

联系方式: _____



3. $\overline{CR} = \overline{Q_3 Q_1} \Rightarrow 10$ 进制计数器.

$$CD = Q_3.$$

4. 用同步置数清零.

$$\overline{LD} = \overline{Q_{11} Q_{20} Q_{22}}.$$

$$5 \times 16 + 2 + 1 = 83 \quad \therefore 83 \text{进制计数器.}$$

