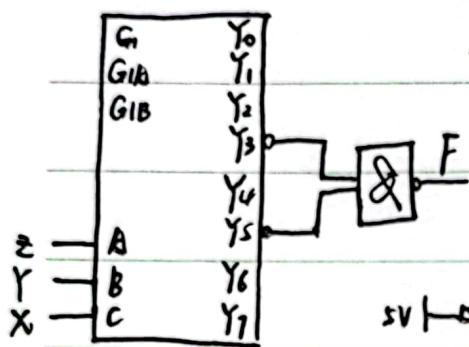


2.18.

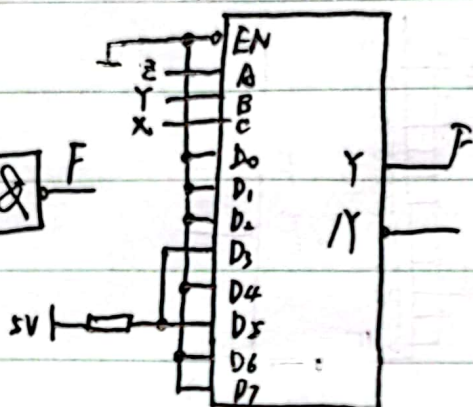
解: (1)  $F = \bar{X}Yz + X\bar{Y}z$   $X, Y, z$  为输入.  $F$  为输出  
 $F = \sum m^3(3, 5)$

$z \backslash XY$	0	1	3	2
0	0	0	0	0
1	1	0	0	1

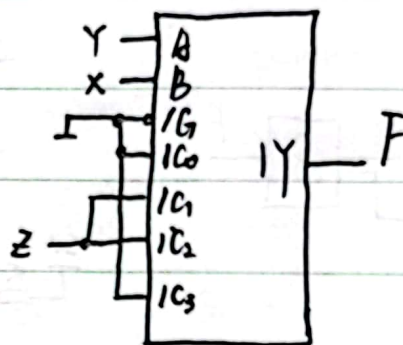
用 74LS183 为:



用 74LS151 为:



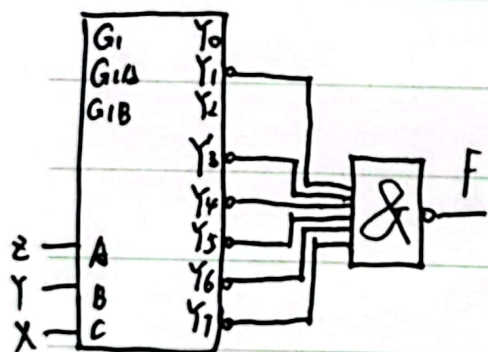
用 74LS153 为

 $\frac{1}{2}$  74LS153

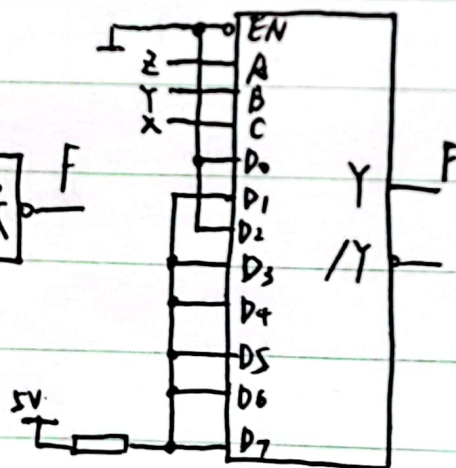
(2)  $F = X\bar{Y}z + X\bar{Y} + z$   $X, Y, z$  为输入  $F$  为输出  
 $F = \sum m^3(1, 3, 4, 5, 6, 7)$

$z \backslash XY$	0	1	3	2
0	0	0	0	0
1	1	1	1	1

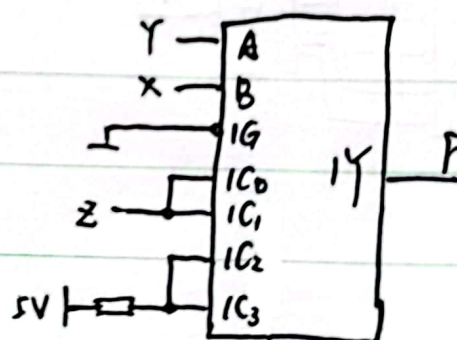
用 74LS183 为



用 74LS151 为



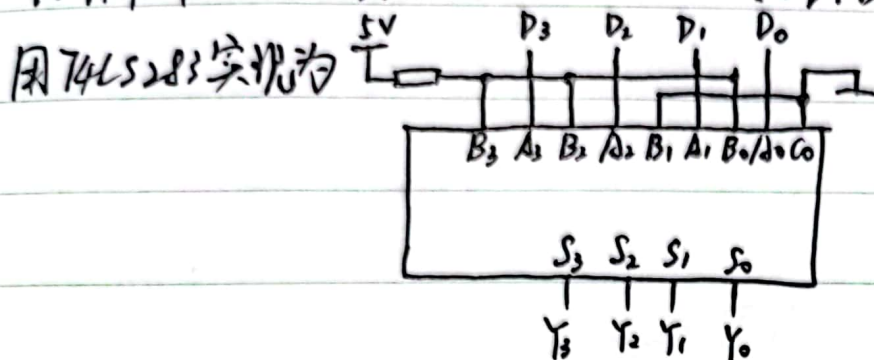
用 74LS153 为

 $\frac{1}{2}$  74LS153

.19

1. 用  $D_0, D_1, D_2, D_3$  表示余3码  $Y_0, Y_1, Y_2, Y_3$  表示8421码

$$Y_0 Y_1 Y_2 Y_3 = D_0 D_1 D_2 D_3 - 0011 = D_0 D_1 D_2 D_3 + 1101$$



2. 用  $W, X, Y, Z$  表示2421码  $D_0, D_1, D_2, D_3$  表示余3码

$W$	$X$	$Y$	$Z$	$D_0$	$D_1$	$D_2$	$D_3$
0	0	0	0	0	0	1	1
0	0	0	1	0	1	0	0
0	0	1	0	0	1	0	1
0	0	1	1	0	1	1	0
0	1	0	0	0	1	1	1
1	0	1	1	1	0	0	0
1	1	0	0	1	0	0	1
1	1	0	1	1	0	1	0
1	1	1	0	1	0	1	1
1	1	1	1	1	1	0	0

作出四卡诺图

$Y_2 \backslash WX$

		1	d
	d	1	d
	d	1	1
	d	1	d

$Y_2 \backslash WX$

	1		d
1	d		d
1	d	1	
1	d		d

$$\therefore D_0 = W$$

$Y_2 \backslash WX$

1	1		d
	d	1	d
1	d		
	d	1	d

$Y_2 \backslash WX$

$$D_1 = \bar{W}X + \bar{W}Y + \bar{W}\bar{Y}Z + XY\bar{Z}$$

$Y_2 \backslash WX$

1	1	1	d
	d		d
	d		
1	d	1	d

$$\therefore D_2 = \bar{W}\bar{Y}\bar{Z} + X\bar{Y}Z + \bar{W}Y\bar{Z} + XY\bar{Z} \quad D_4 = \bar{Z}$$