3-4.

(1) $F_1(A,B,C)=AB+C$

解:$F_1(A,B,C)=ABC+AB\bar{C}+\bar{A}BC+A\bar{B}C+\bar{A}\bar{B}C$

(7) $F_7(A,B,C)=\Pi M(0,1,4,5)$
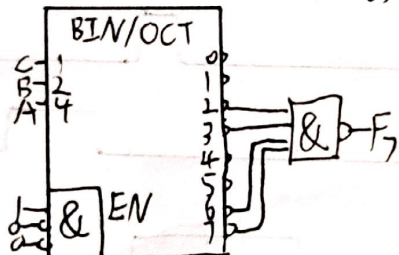
解:$F_7(A,B,C)=\Sigma m(2,3,6,7)$

(3) $F_3(A,B,C)=(\bar{A}+\bar{B})C$

解:$F_3(A,B,C)=\bar{A}C+\bar{B}C=\bar{A}BC+\bar{A}\bar{B}C+A\bar{B}C$

3-5.

(3) $F_3(A,B,C,D)=\bar{A}(B+D)+\overline{C+BD}$

解:$F_3(A,B,C,D)=\bar{A}B+\bar{A}D+\bar{C}\cdot\overline{BD}$
$=\bar{A}B+\bar{A}D+\bar{B}\bar{C}+\bar{C}\bar{D}$
$=\Sigma m(0,1,3,4,5,6,7,8,9,12)$
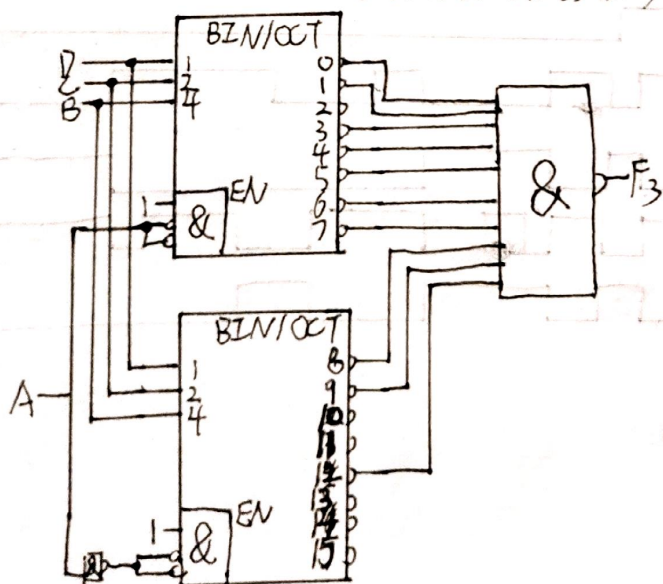
(6) $F_6(A,B,C,D)=\Pi M(1,3,5,6,8,10,12,13,15)$
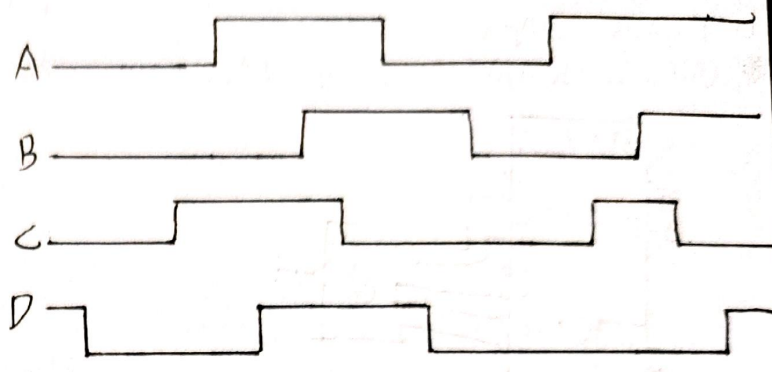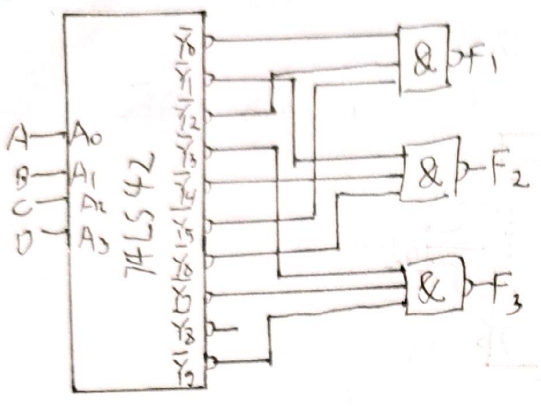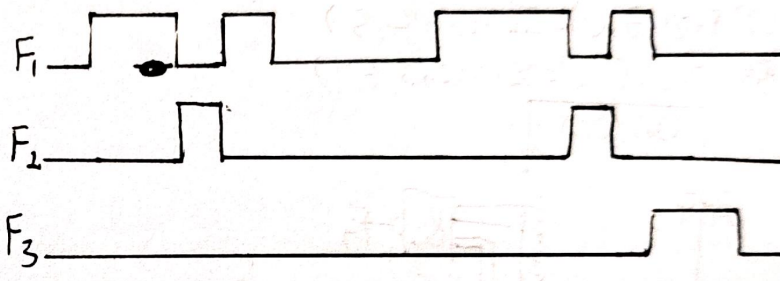
解:$F_6(A,B,C,D)=\Sigma m(0,2,4,7,9,11,14)$
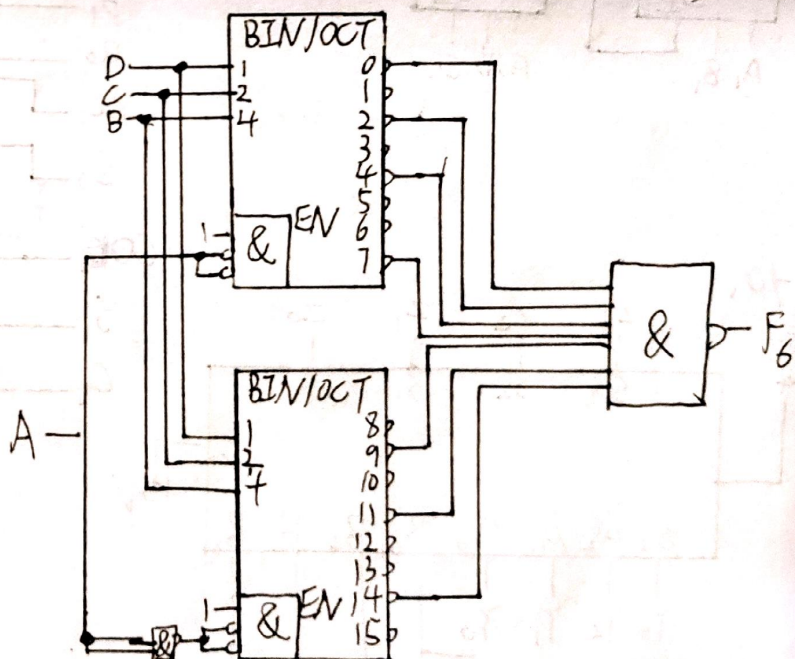
3-6、

解：$\bar{Y}_0 = A_3 + A_2 + A_1 + A_0$, $\bar{Y}_1 = A_3 + A_2 + A_1 + \bar{A}_0$, $\bar{Y}_2 = A_3 + A_2 + \bar{A}_1 + A_0$, $\bar{Y}_3 = A_3 + A_2 + \bar{A}_1 + \bar{A}_0$, $\bar{Y}_4 = A_3 + \bar{A}_2 + A_1 + A_0$

$\bar{Y}_5 = A_3 + \bar{A}_2 + A_1 + \bar{A}_0$, $\bar{Y}_6 = A_3 + \bar{A}_2 + \bar{A}_1 + A_0$, $\bar{Y}_7 = A_3 + \bar{A}_2 + \bar{A}_1 + \bar{A}_0$, $\bar{Y}_8 = \bar{A}_3 + A_2 + A_1 + A_0$, $\bar{Y}_9 = \bar{A}_3 + A_2 + A_1 + \bar{A}_0$
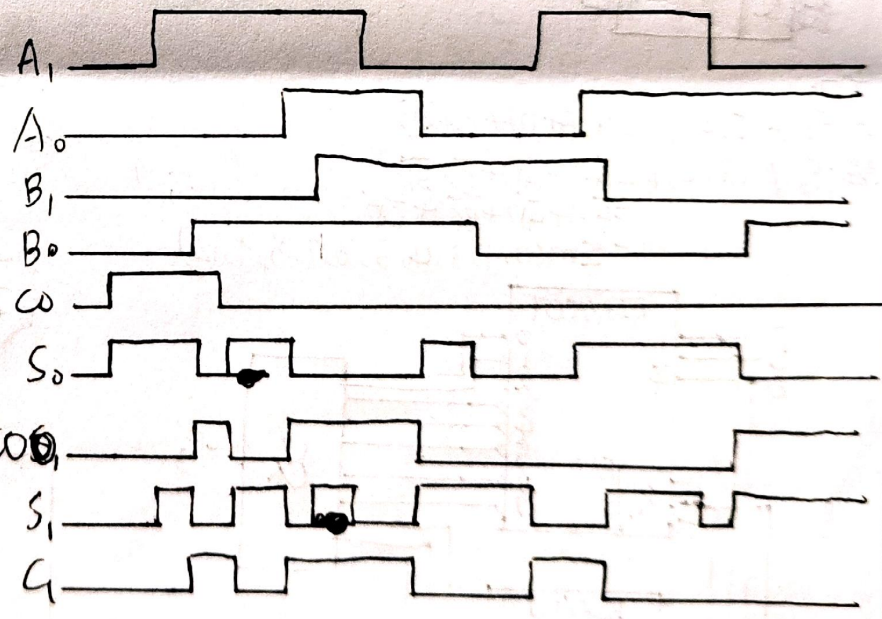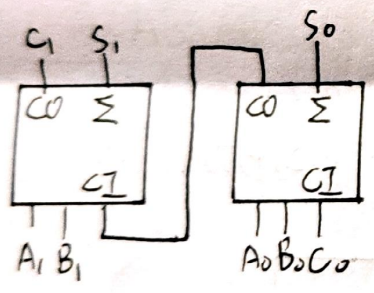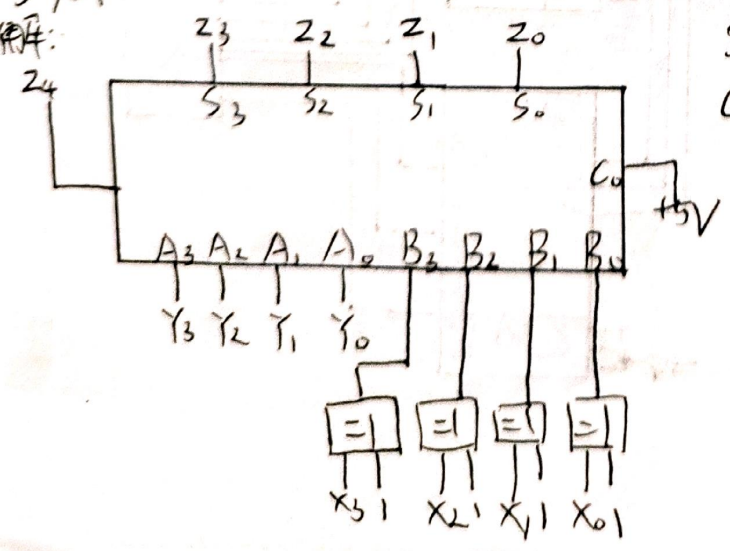
3-7.

解：

$F_1 = \overline{\bar{Y}_0 \cdot \bar{Y}_2 \cdot \bar{Y}_5} = \bar{A}\bar{B}\bar{C}\bar{D} + \bar{A}B\bar{C}\bar{D} + \bar{A}\bar{B}C\bar{D} + \bar{A}BC\bar{D}$

$F_2 = \overline{\bar{Y}_4 \cdot \bar{Y}_1 \cdot \bar{Y}_6} = \bar{A}C\bar{D} + A\bar{B}\bar{C}\bar{D}$

$F_3 = \overline{\bar{Y}_3 \, \bar{Y}_7 \, \bar{Y}_9} = AB\bar{D} + A\bar{B}\bar{C}D$

3.8、

3-10.

解：

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A_0, A_1, A_2, A_3 } P (3)

P>Q — A>B
P=Q — A=B
P<Q — A<B

B_0, B_1, B_2, B_3 } Q (3)

解:

A_0
A_1
A_2
A_3
B_0
B_1
B_2
B_3
A>B
A=B
A<B
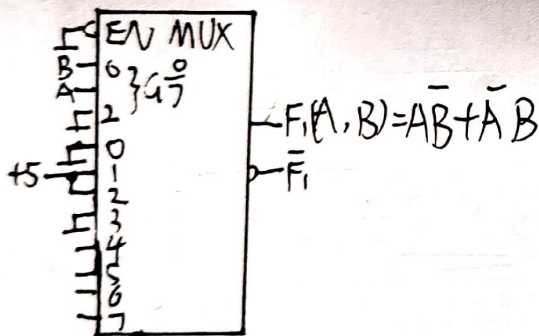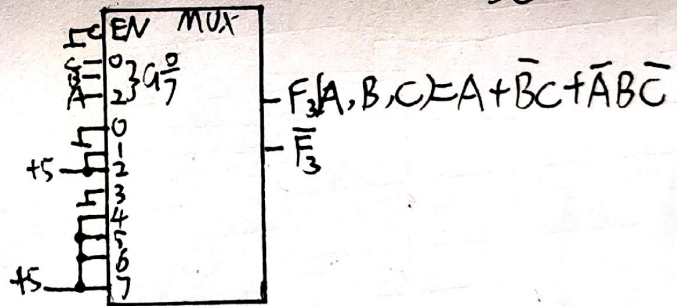
3-12、
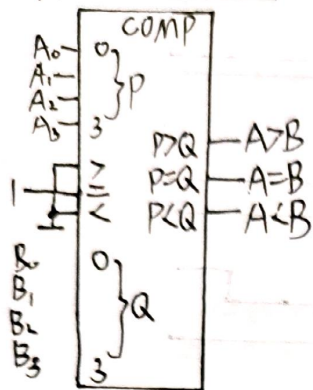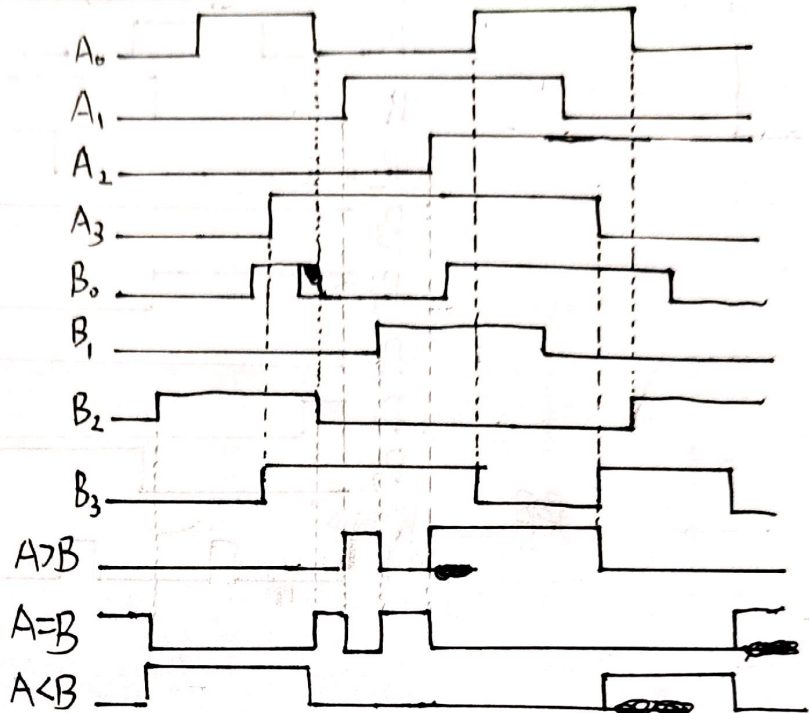
(1) $F_1(A,B) = A\bar{B} + \bar{A}B$
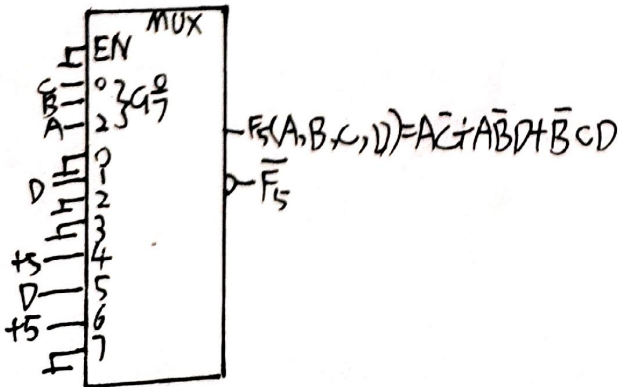

— $F_1(A,B) = A\bar{B} + \bar{A}B$
— $\bar{F_1}$

(3) $F_3(A,B,C) = A + \bar{B}C + \bar{A}B\bar{C}$
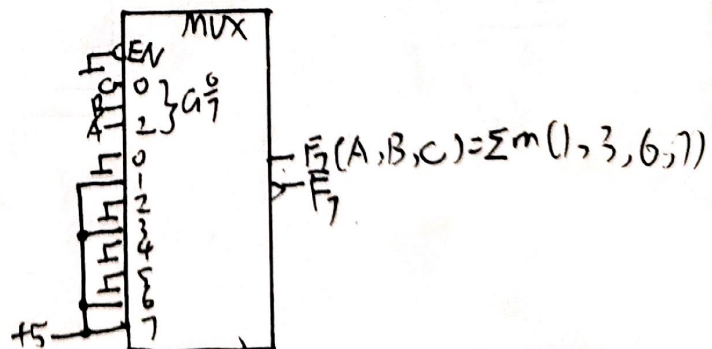
解: $F_3(A,B,C) = A + \bar{A}\bar{B}C + \bar{A}B\bar{C}$

— $F_3(A,B,C) = A + \bar{B}C + \bar{A}B\bar{C}$
— $\bar{F_3}$

(5) $F_5(A,B,C,D) = A\bar{C} + AB\bar{D} + \bar{B}CD$

解: $F_5(A,B,C,D) = AB\bar{C} + A\bar{B}\bar{C} + AB\bar{C}D + AB\bar{C}D + \bar{A}\bar{B}CD + A\bar{B}CD$

— $F_5(A,B,C,D) = A\bar{C} + AB\bar{D} + \bar{B}CD$
— $\bar{F_5}$
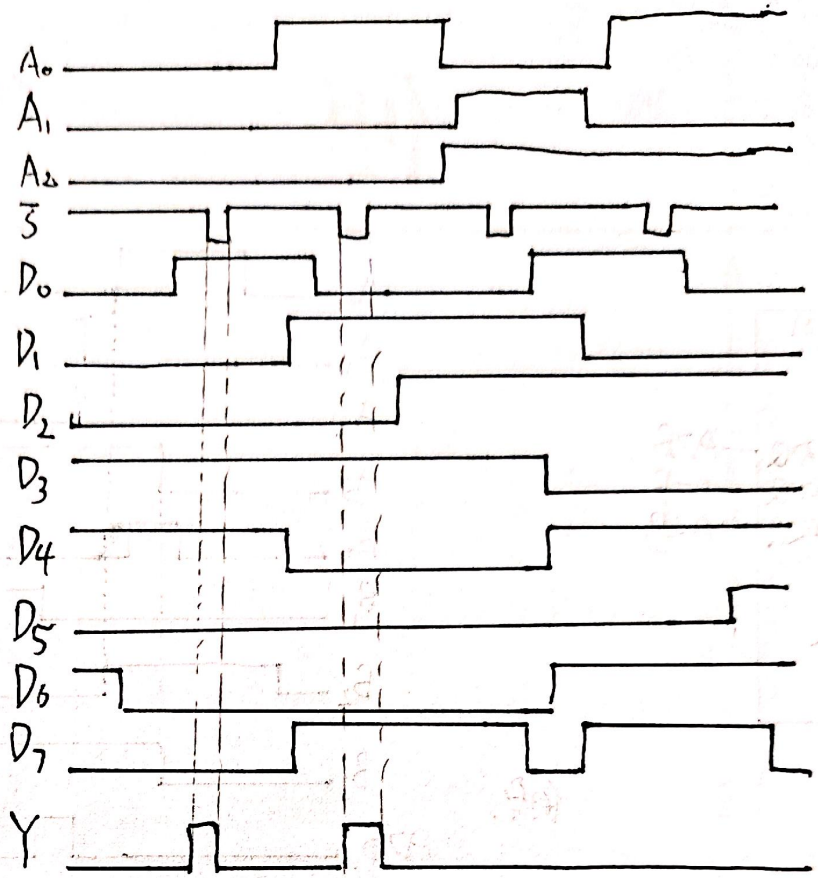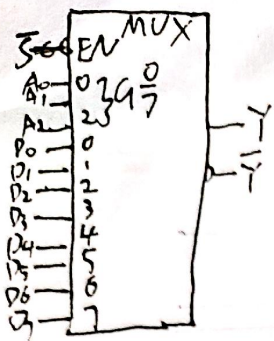
(7) $F_7(A,B,C) = \sum m(1,3,6,7)$

解:

— $\bar{F_7}(A,B,C) = \sum m(1,3,6,7)$

年　　月　　日

3-15.