班级：计01   姓名：容逸朗   编号：20200089   科目：数电   第 1 页

2.7 (1) $F=ABC+\bar{A}+\bar{B}+\bar{C}$

由卡诺图：

得 $F= \Sigma m^3(0,1,2,3,4,5,6,7)$

(2) $F=AB+\bar{A}\bar{B}+\bar{A}B+\bar{C}D$

由卡诺图：

得： $F= \Sigma m^4(0,1,2,3,5,6,7,9,10,11,13,14,15)$

(3) $F= \overline{\bar{A}(B+\bar{C})}$

$= A + \overline{(B+\bar{C})}$

$= A + \bar{B}C$

由卡诺图：

得： $F= \Sigma m^3(1,3,4,5,7)$

2.11 (1) $F= \Sigma m^3(0,1,2,6,5,7)$

$F= \bar{B}+\bar{A}\bar{C}+AC$

(2) $F= \Sigma m^4(0,1,2,3,4,6,7,8,9,11,15)$

$F= \bar{B}\bar{C} + \bar{A}\bar{D} + AB$

2.11 (3) $F=\Sigma m^4(3,6,5,7,9,13,14,15)$

$F= \bar{B}C\bar{D} + A\bar{B}\bar{D} + BCD + \bar{A}\bar{B}D$

2.12 (1)

$F= \bar{D} + AC$

(2)

$F= \bar{A}\bar{B}\bar{C} + A\bar{C}\bar{D} + \bar{A}C\bar{D} + \bar{A}BC$

(3)

$F= \bar{A}\bar{C} + \bar{B}\bar{C} + AC\bar{D}$

2.13 (1) $F=ABC+\bar{A}\bar{B}C+\bar{A}B\bar{C}+A\bar{B}\bar{C}+\bar{A}\bar{B}\bar{C}$

得： $F= \bar{A}\bar{C}+\bar{B}\bar{C}+\bar{A}\bar{B} + ABC$

(2) $F= AC+ABC+A\bar{C}+\bar{A}\bar{B}\bar{C} + BC$

得： $F= \bar{B}\bar{C} + A + BC$

(3) $F= \bar{B}\bar{D} + A\bar{B}C\bar{D}+ \bar{A}\bar{B}\bar{C}$

得： $F= \bar{B}\bar{D} + \bar{A}\bar{B}\bar{C} + ABCD$