1a.

x \ Yz	00	01	11	10
0	1			1
1			1	1

F=xy+x’z’

1b

A \ BC	00	01	11	10
0	1		1	1
1	1			1

F=C’+A’B

2a

wx \ yz	00	01	11	10
00		1	1	1
01		1	1	
11		1	1	
10		1	1	1

F=x’y+z

2b

wx \ yz	00	01	11	10
00			1	1
01		1	1	
11		1	1	1
10			1	1

F=xz+wy+x’y

3a

x \ yz	00	01	11	10
0	1	1	X	1
1	1	1	X	X

F=1=Σ(0,1,2,3,4,5,6,7)

3b

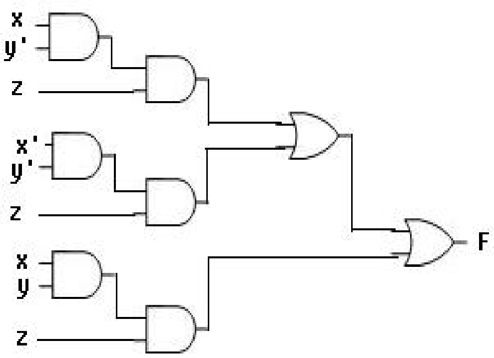
AB \ CD	00	01	11	10
00		1	1	
01	X	1	1	X
11	X	X	1	
10		1		

F=A’D+BD+C’D=Σ(1,3,5,7,9,13,15)

4a F=xy’z+x’y’z+xyz

x	y	Z	F
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

4b



4c

F=xy’z+x’y’z+xyz

=xz(y+y’)+y’z(x+x')

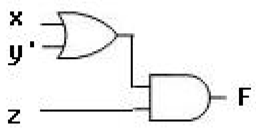
=xz+y’z

=z(x+y’)

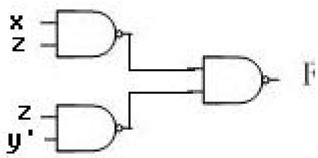
4d F=xy’z+x’y’z+xyz

x	y	Z	F
0	0	0	0
0	0	1	1
0	1	0	0
0	1	1	0
1	0	0	0
1	0	1	1
1	1	0	0
1	1	1	1

4e



4f

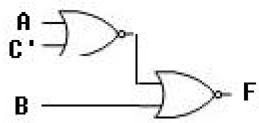


5

AB \ CD	00	01	11	10
00	1	1	0	X
01	0	0	0	0
11	0	0	X	X
10	X	1	1	X

F'=B+A'C

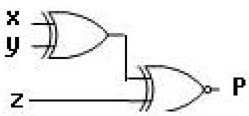
F=(B+A'C)'=B'(A+C')



((A+C')'+B)'=(A+C')B'

6

Refer to your notes. We covered the even parity bit generator. So odd parity bit generator is just the complement (this you should show with a table and then boolean algebra): $P=(x\oplus y\oplus z)'$



$C=(x\oplus y\oplus z\oplus P)'$