Answers:

(a) For Z to be 1, Q8 and Q6 and (Q4 or Q2) must turn on.
This implies that C=D=0, and (B or A = 0).

For Z to be 0, Q5 or Q7 or (both Q1 and Q3) must turn on.
This implies that C or D=1 or (A=B=1).

(b) For Z to be 1, Q6 or Q8 or (Q2 and Q4) must turn on.
This implies that C or D=0 or (A=B=0).

For Z to be 0, (both Q5 and Q7) and (Q3 or Q1) must turn on.
This implies that C=D=1, and (A or B=1)

(a)

A	B	C	D	Z
0	0	0	0	1
0	0	0	1	0
0	0	1	0	0
0	0	1	1	0
0	1	0	0	1
0	1	0	1	0
0	1	1	0	0
0	1	1	1	0
1	0	0	0	1
1	0	0	1	0
1	0	1	0	0
1	0	1	1	0
1	1	0	0	0
1	1	0	1	0
1	1	1	0	0
1	1	1	1	0

(b)

A	B	C	D	Z
0	0	0	0	1
0	0	0	1	1
0	0	1	0	1
0	0	1	1	1
0	1	0	0	1
0	1	0	1	1
0	1	1	0	1
0	1	1	1	0
1	0	0	0	1
1	0	0	1	1
1	0	1	0	1
1	0	1	1	0
1	1	0	0	1
1	1	0	1	1
1	1	1	0	1
1	1	1	1	0