3.

	A_3	A_2	A_1	A_0	P	D
0	0	0	0	0	0	0
1	0	0	0	1	0	0
2	0	0	1	0	1	0
3	0	0	1	1	1	1
4	0	1	0	0	0	0
5	0	1	0	1	1	0
6	0	1	1	0	0	1
7	0	1	1	1	1	0
8	1	0	0	0	0	0
9	1	0	0	1	0	1
10	1	0	1	0	0	0
11	1	0	1	1	1	0
12	1	1	0	0	0	1
13	1	1	0	1	1	0
14	1	1	1	0	0	0
15	1	1	1	1	0	1

For D

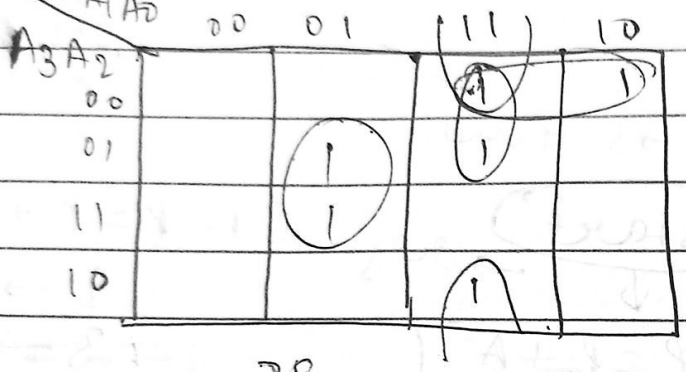
A_0A_1 \ A_2A_3	00	01	11	10
00			1	
01				1
11	1		1	
10		1		

$$D = \bar{A}_3 \bar{A}_2 A_1 A_0 + \bar{A}_3 A_2 A_1 \bar{A}_0 + A_3 \bar{A}_2 \bar{A}_1 A_0 + A_3 A_2 \bar{A}_1 \bar{A}_0 + A_3 A_2 A_1 A_0$$

Q.1) $E = S\bar{A} + H + AL$

$$\boxed{E = S\bar{A} + H + AL}$$

.2) input A



3 2 1 0
0 0 1 1

$$P = \bar{A}_1\bar{A}_0A_2 + A_1A_0\bar{A}_3 + A_1\bar{A}_2\bar{A}_3 + A_1A_0\bar{A}_2$$

P

(1)

P = 1

6.

8	4	2	1	
0	0	0	0	0
0	0	0	1	1 → Jan →
0	0	1	0	2 - Feb
0	0	1	1	3 - Mar →
0	1	0	0	4 - Apr
0	1	0	1	5 - May →
0	1	1	0	6 - June
0	1	1	1	7 - July →
1	0	0	0	8 - Aug →
1	0	0	1	9 - Sep
1	0	1	0	10 - Oct →
1	0	1	1	11 - Nov.
1	1	0	0	12 - Dec. →
1	1	0	1	13
1	1	1	0	14
1	1	1	1	15
A	B	C	D	

31 days

using K-map.

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

← A1 A0.

A3 A2.

$Y = A3 \oplus A0$

0 0 0 → A

0 0 1 → B

0 1 0 → C

0 1 1 → D

1 0 0 → E

1 0 1 → F

1 1 0

1 1 1