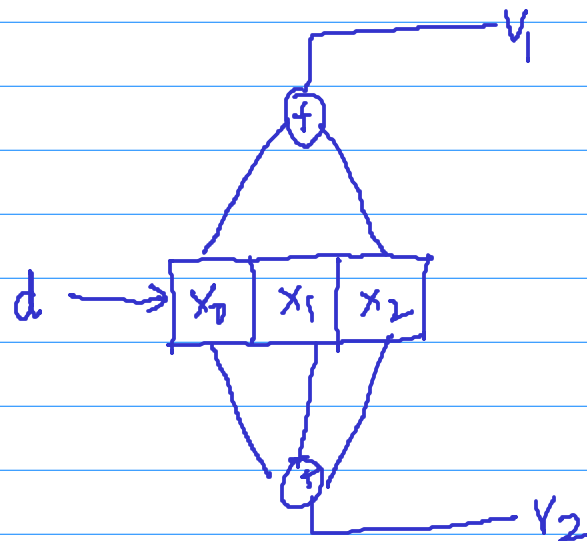


(n, k, m) convolutional code
 $(2, 1, 3)$



$$V_1 = x_0 \oplus x_2$$

$$V_2 = x_0 \oplus x_1 \oplus x_2$$

$d = 1010$

$C = ?$

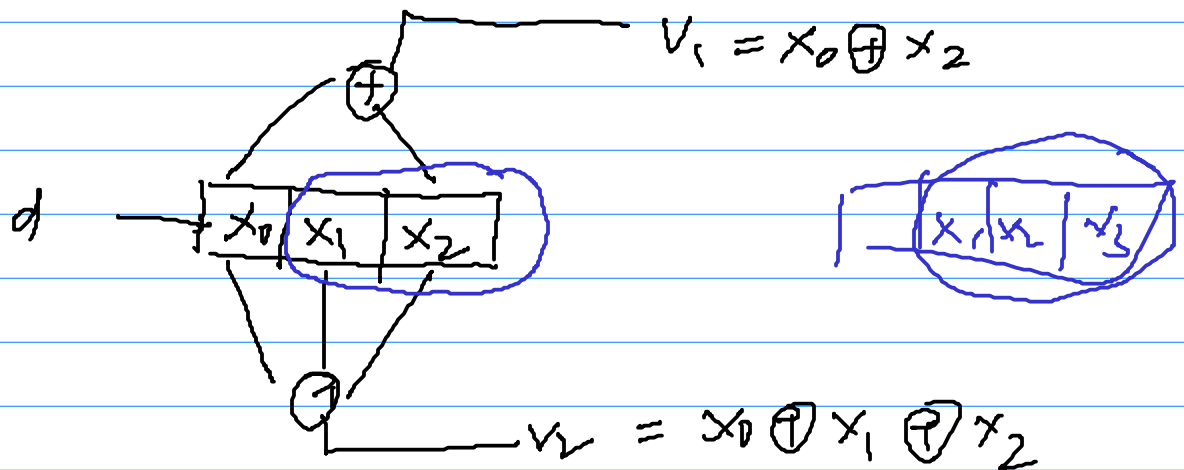
using Encoder Diagram

d	x_0	x_1	x_2	V_1	V_2
—	0	0	0	—	—
1	1	0	0	1	1
0	0	1	0	0	1
1	1	0	1	0	0
0	0	1	0	0	1
	0	0	1	1	1
	0	0	0	0	0
	0	0	0	—	—

Code 11 01 00 01 11 00

② $d = 1010$, using impulse Response, $C = ?$

i/p \rightarrow \rightarrow o/p
 impulse response



d	x_0	x_1	x_2	V_1	V_2
0	0	0	0	0	0
1	1	0	0	1	1
0	0	1	0	0	1
0	0	0	1	1	1

Impulse Response 11 01 11

① data 1010
 $c = 7$

✓ 1 1 0 1 0 0 1 1 0 0
 ✓ 0 0 0 0 0 0 0 0
 ✓ 1 1 0 1 1 1 1 1
 ✓ 0 0 0 0 0 0 0 0

1 1 0 1 0 0 0 1 1 1 0 0

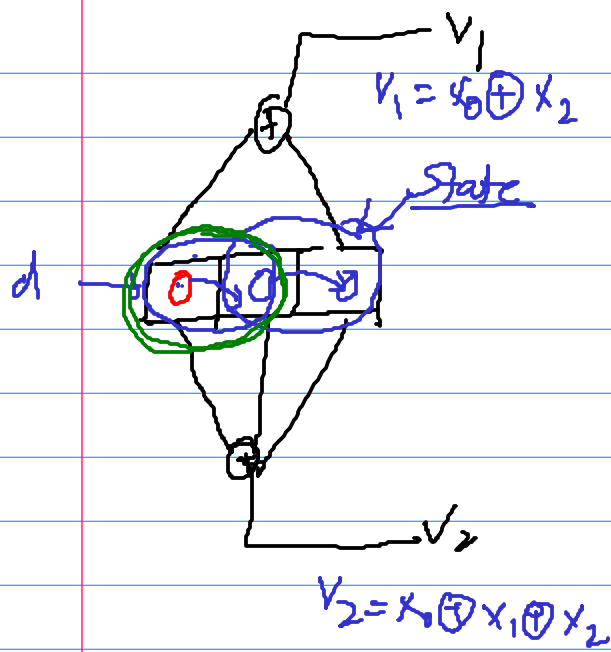
② data = 1100 code = ?

1	1	0	1	1	1		
		1	1	0	1	1	
				0	0	0	0
					0	0	0
<hr/>							
1	1	1	0	1	0	0	0

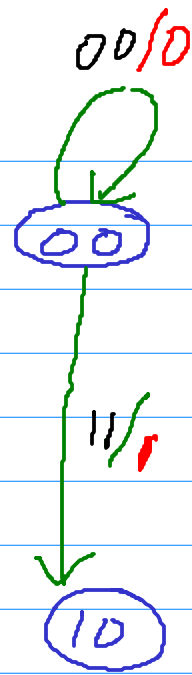
③ $d = 0101$

0	0	0	0	0	0		
		1	1	0	1	1	
				0	0	0	0
					1	1	0
						1	1
<hr/>							
0	0	1	1	0	1	0	0

State diagram



11

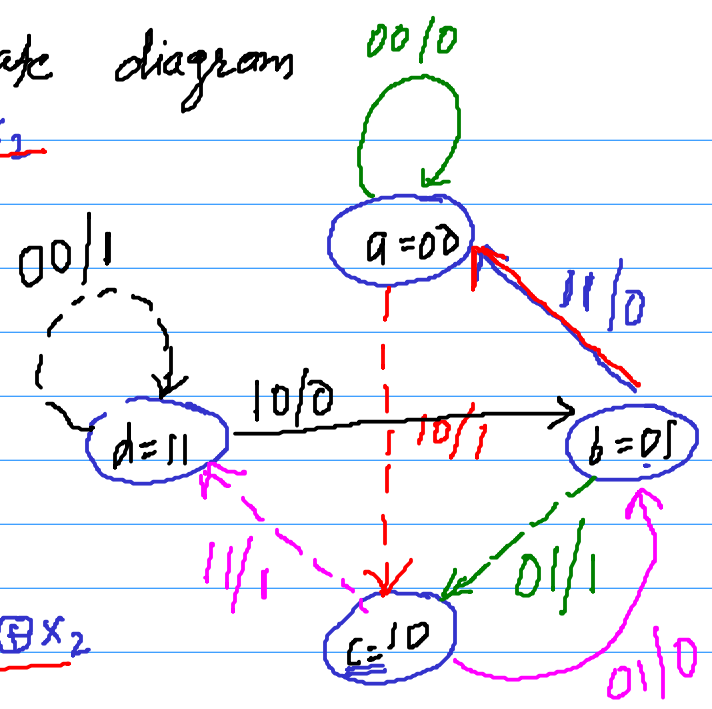
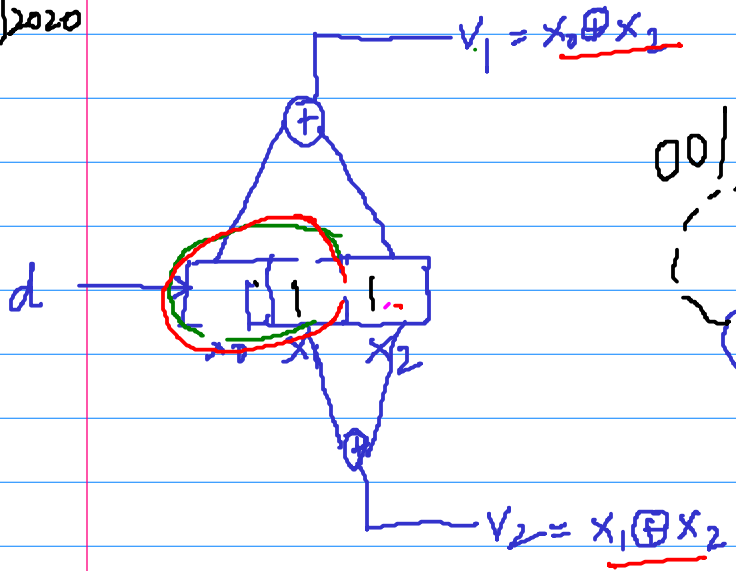


I/P	P.S.	code	N.S.
d x_1, x_2	V_1, V_2	x_1, x_2	
0 0 0	0 0	0 0	
1 0 0	1 1	1 0	

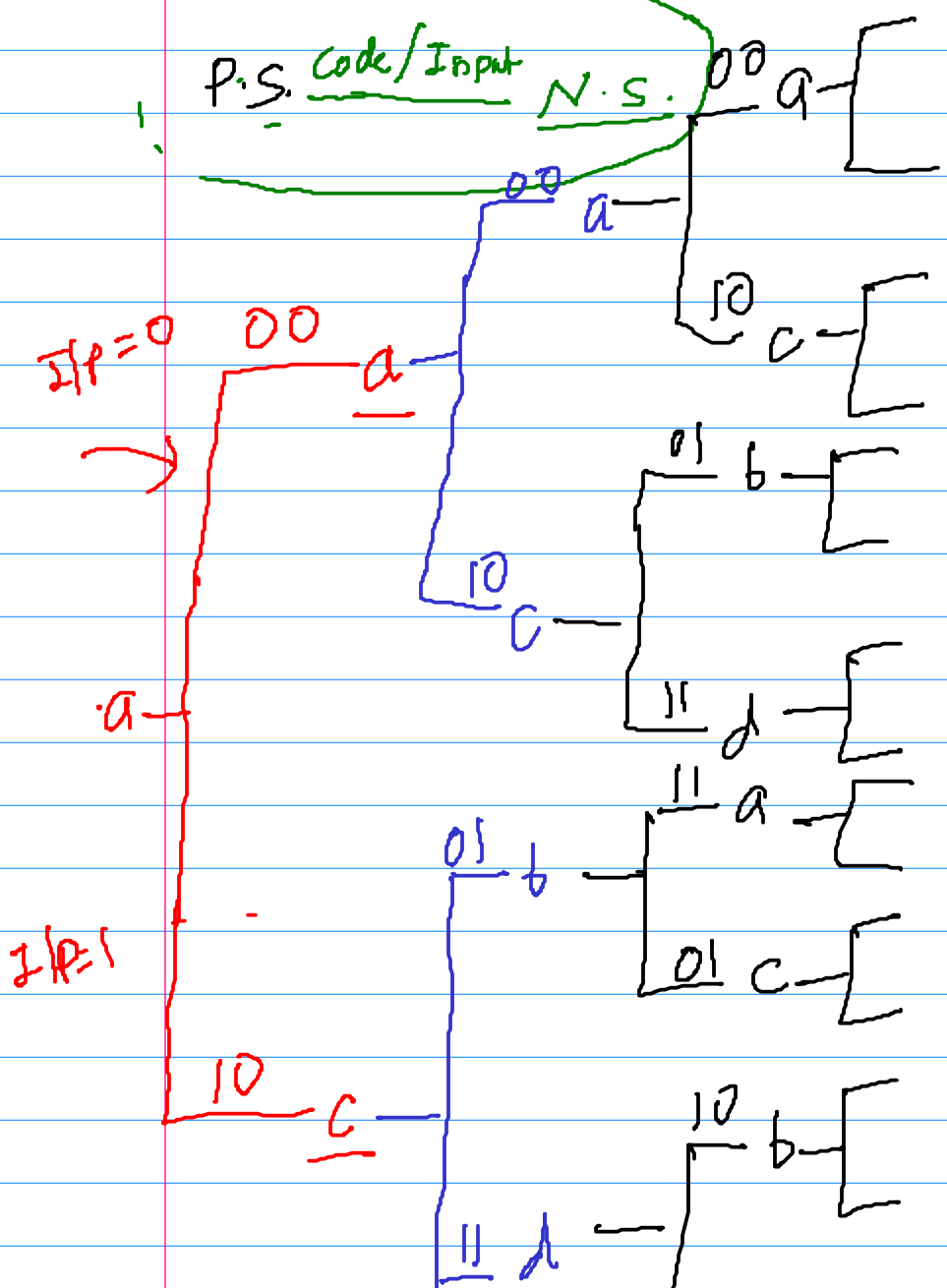
30/9/2020

(2,1,3)

State diagram



P.S. Code/Input N.S.



$\log_d \left[\right]$

Trallis diagrams

