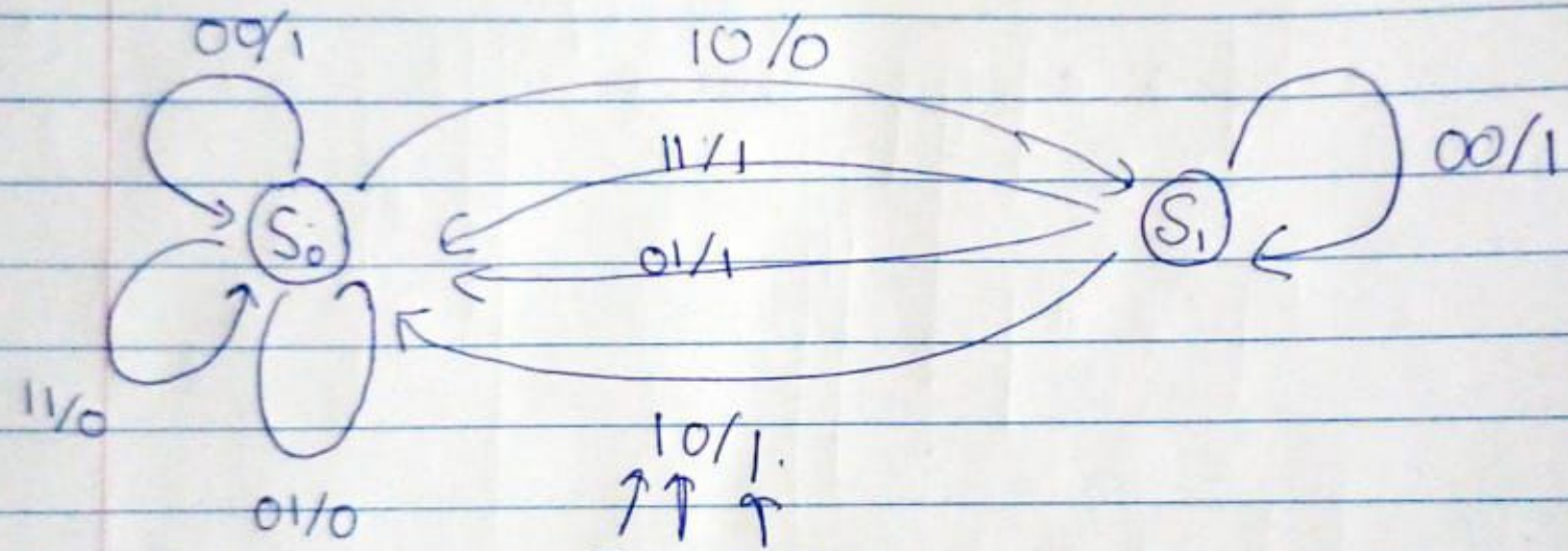


I S output

Input

0 to use 1 when we have taken 3 inputs

Transition & O/p table:

PS	NS				O/p			
	I st I st 0 0	I st I st 0 1	I st I st 1 0	I st I st 1 1	I st I st 0 0	I st I st 0 1	I st I st 1 0	I st I st 1 1
S_0	S_0	S_0	S_1	S_0	1	1	0	1
S_1	S_1	S_0	S_0	S_0	0	0	1	0

NS

Excitation Table :-

($S_0 = 0$, $S_1 = 1$) S/st = present input

PS	I/p I	I/p st	NS	O/p
0	0	0	0	1
0	0	1	0	1
0	1	0	1	0
0	1	1	0	1
1	0	0	1	0
1	0	1	0	0
1	1	0	0	1
1	1	1	0	0

O/p

$$NS = \bar{P}IS + P\bar{I}\bar{S}$$

$$O/p = \bar{P}I\bar{S} + \bar{P}\bar{I}S + \bar{P}IS + PI\bar{S}$$
$$= \bar{P}\bar{I} + \bar{P}S + PI\bar{S} \quad \text{(simplified)}$$

→ when st = 1 ; we are re-setting and printing output
when st = 0 ; we are taking bit-wise inputs

NS

P \ IS	00	01	11	10
0	0	0	0	1
1	1	0	0	0

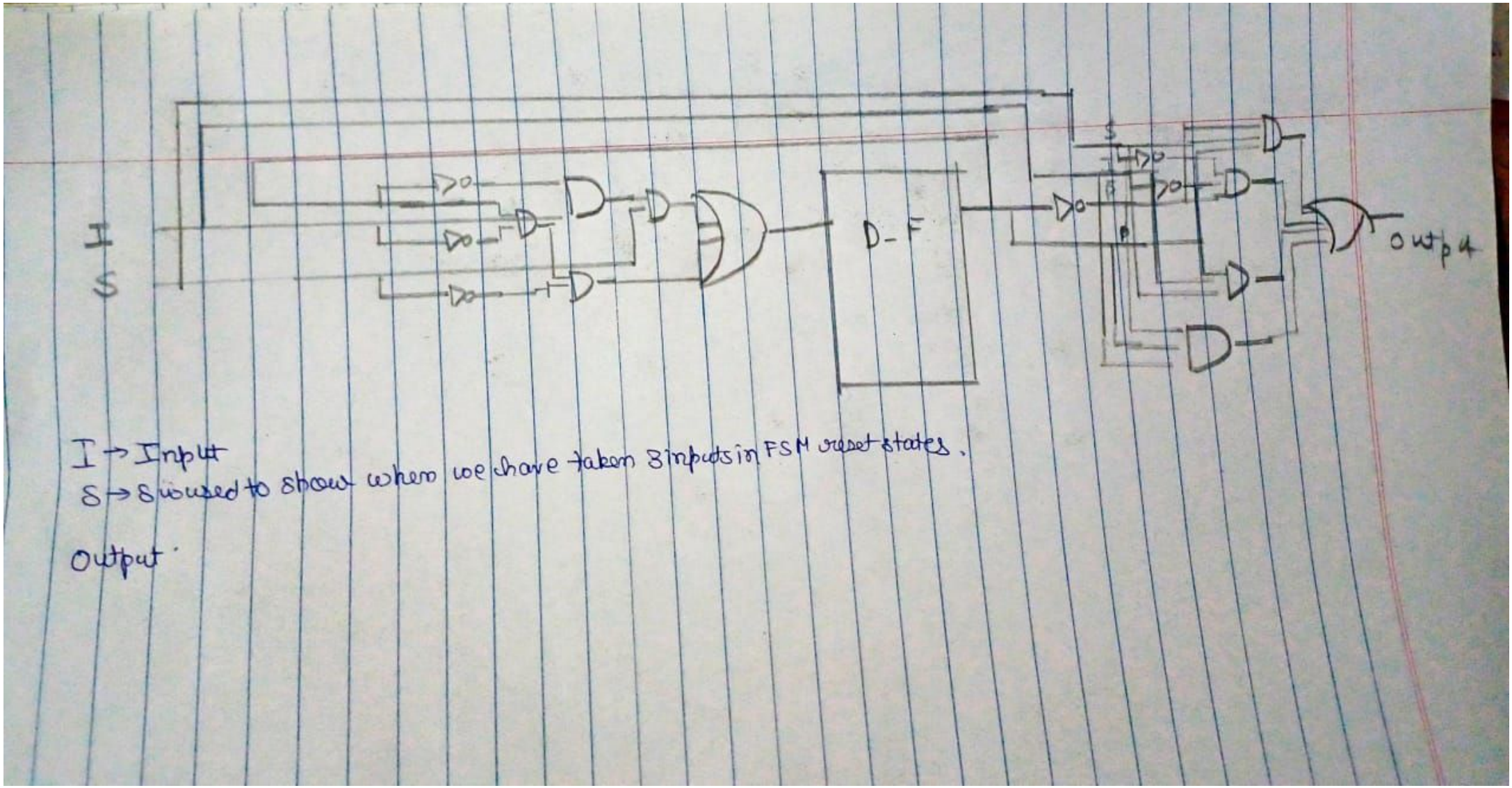
(no - simplification possible)

O/p

P \ IS	00	01	11	10
0	1	1	1	0
1	0	0	0	1

$O/p = \bar{P}\bar{I} + \bar{P}S + P I\bar{S}$

(no simplification possible)



I → Input
S → S is used to show when we have taken 3 inputs in FSM reset states.

Output.