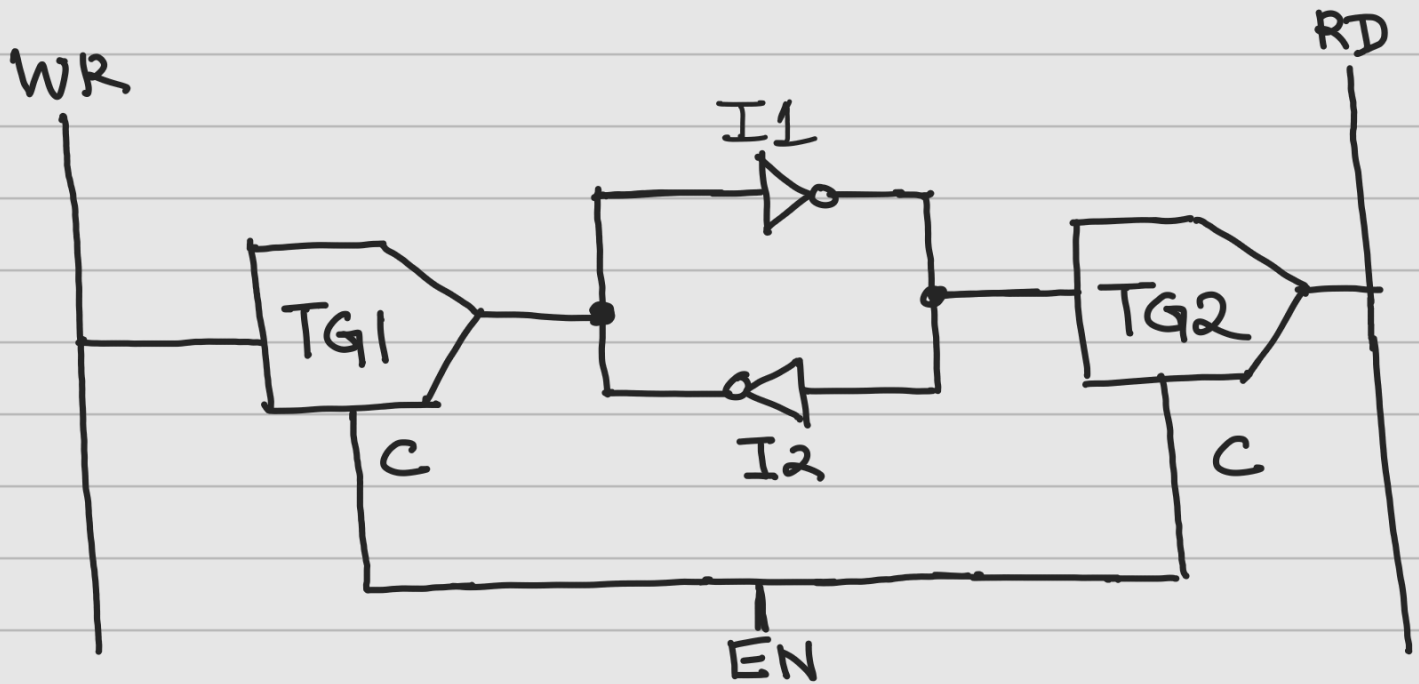


## SYMBOL - LEVEL SCHEMATIC :



TG0, TG1 : Transmission Gates (TG)

C : Control signal of TG

WR : Write-Line

RD : Read-Line

EN : Write-enable

\* Operation :-

Case-1 :-  $EN = C = 1 \Rightarrow TG1 = TG2 = ON$

(a)  $WR = 1$  :

o/p of TG1 = S-1

o/p of I1 = S-0

o/p of TG2 = RD = S-0

(b)  $WR = 0$

o/p of TG1 = S-0

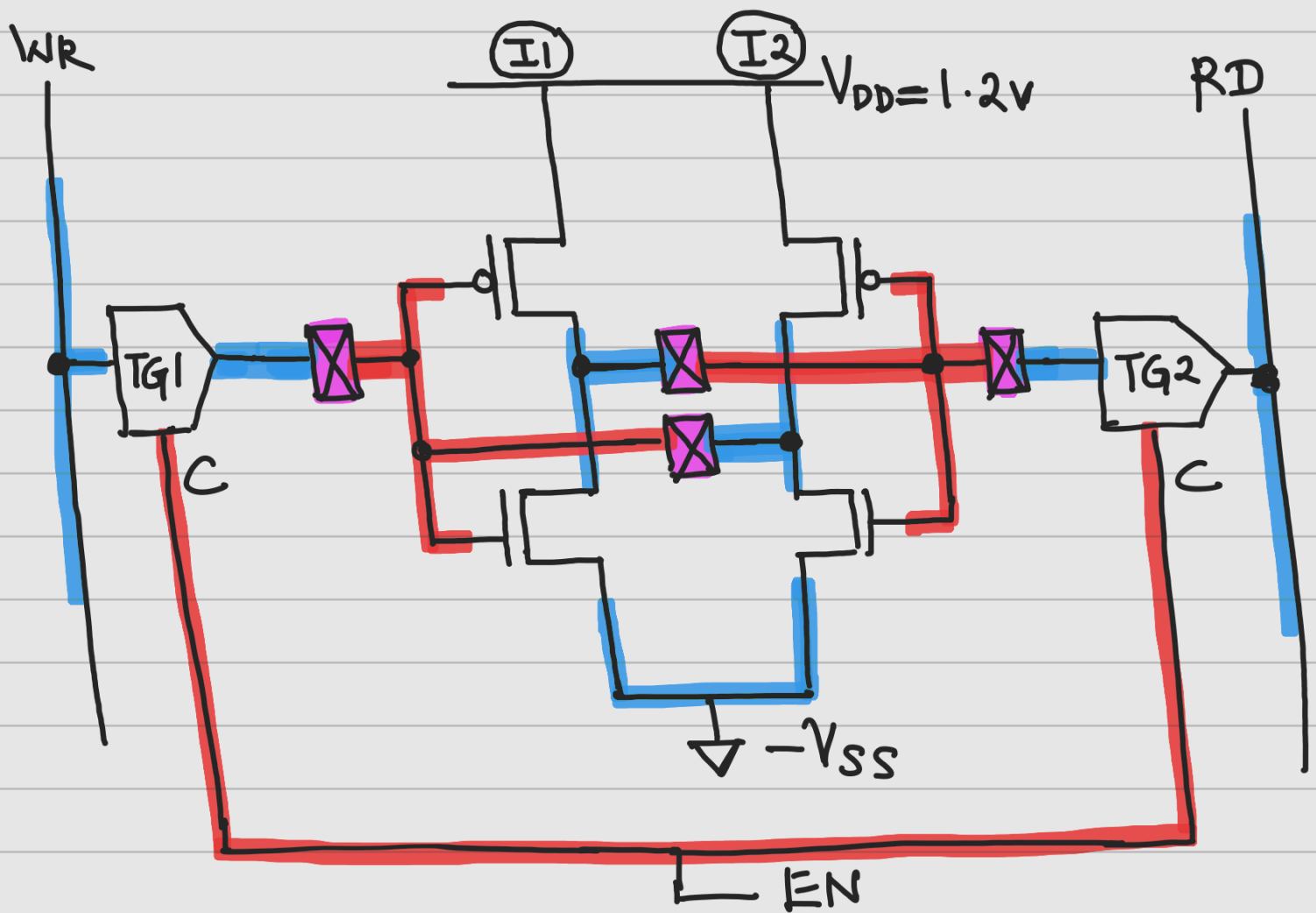
o/p of I1 = S-1

o/p of TG2 = RD = S-1

Case-2 :-  $EN = C = 0 \Rightarrow TG1 = TG2 = OFF$

RD-Line is disconnected from WR-line  
 $\therefore$  No CHARGE condition.

# \* MOSFET-level Schematic:-



— Metal-1 Layer  
— Polysilicon Layer

$$(*) \frac{W_P}{L_P} = \left( \frac{500}{100} \right) \text{nm} = 5 = p$$

$$(*) \frac{W_N}{L_N} = \left( \frac{500}{100} \right) \text{nm} = 5 = n$$

$$(*) \frac{p}{n} = \frac{5}{5} = (1) \Rightarrow \text{Relative size.}$$