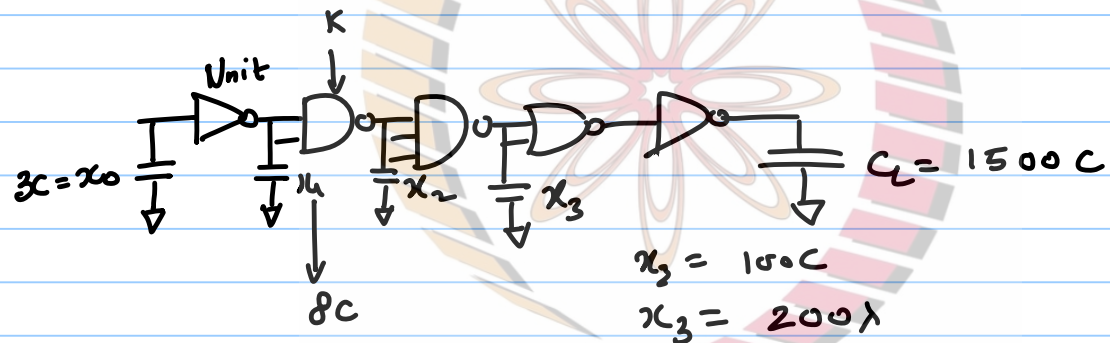


17/10/2019

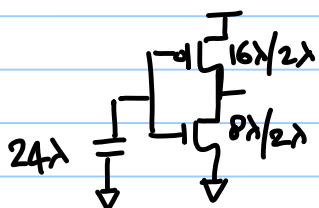
EE5311

### TUTORIAL-3



$$5KC = 8WC$$

$$\therefore K = 20$$

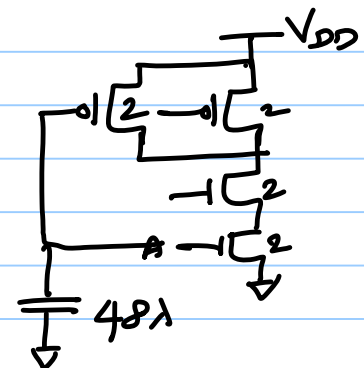


$$4KC = 8C$$

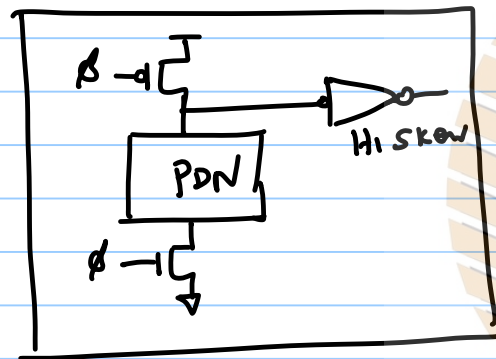
$$\therefore K = 2$$

$$C_L = 2250\lambda$$

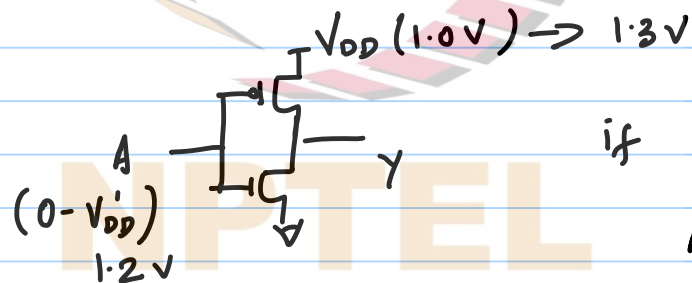
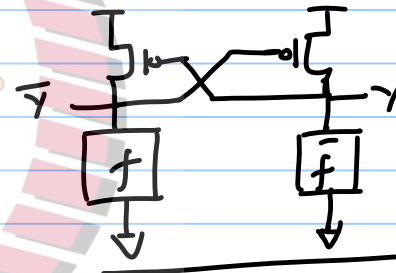
$$x_1 = 48\lambda$$



# MODULE 4:



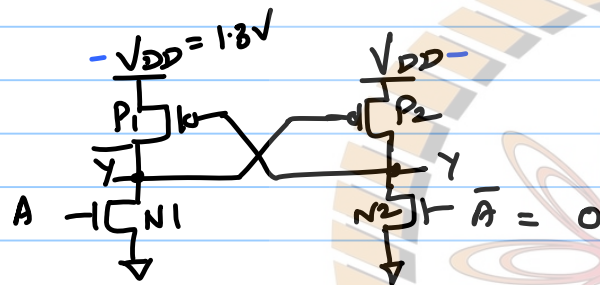
CVSL



if  $V_{DD} > V_{DD}$

$$A = V_{DD} = 1.2V \Rightarrow V_{GSP} = +0.2V$$

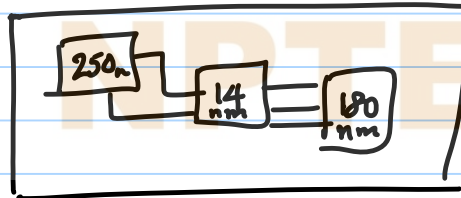
if  $V_{DD} = 0.8V$  &  $A = V_{DD} = 0.8$   
 $V_{GSP} = -0.2V$



$$A = 0.8V$$

$A = 0.8V \Rightarrow N1$  is ON  
 $\Rightarrow$  GATE OF  $P2 =$  LOW Voltage  
 $\Rightarrow P2$  TURN ON  
 $\Rightarrow Y = V_{DD}$  ( $N2$  is OFF)  
 $\Rightarrow V_{GSP}$  OF  $P1 = 0$   
 $\Rightarrow P1$  IS OFF

$\Rightarrow$  CVSL IS GOOD FOR LEVEL TRANSLATION FROM LOW TO HIGH  $V_{DD}$  DOMAIN



3.3 V

