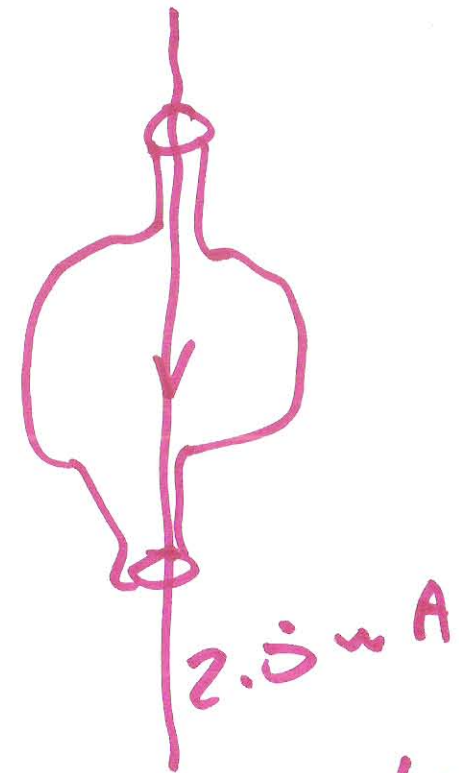
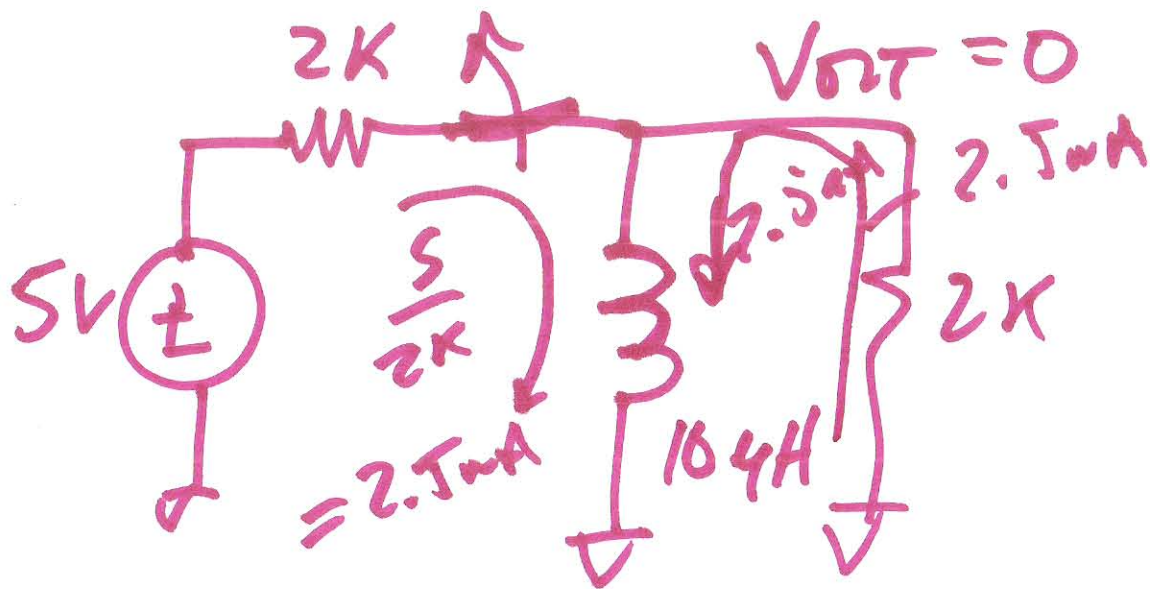


EE 421 / ECG 621

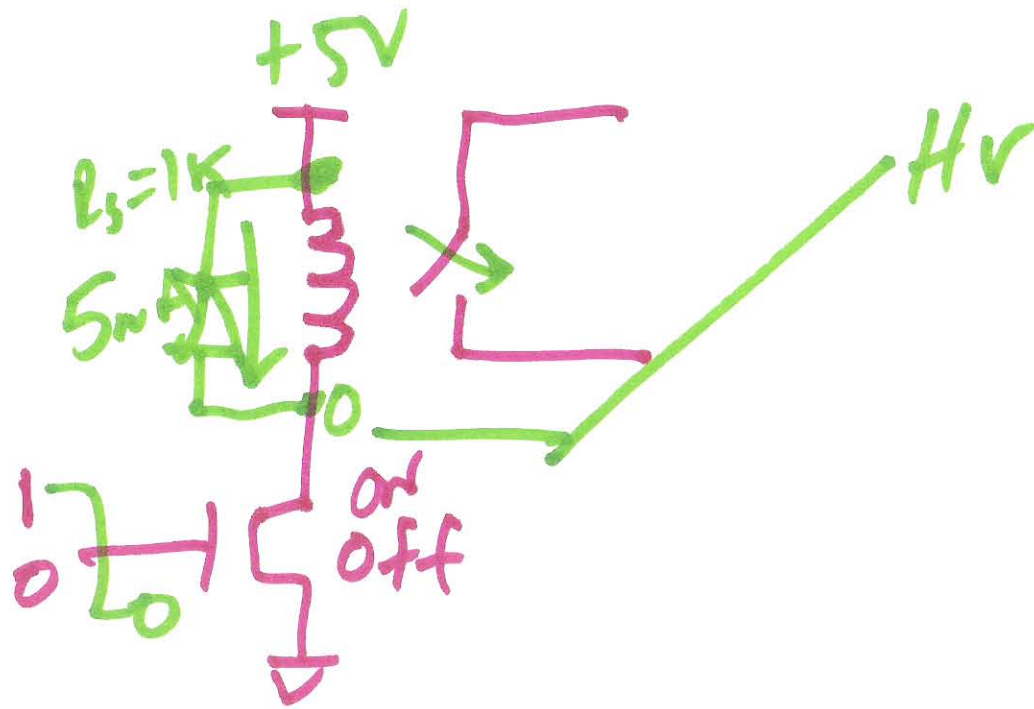
August 31, 2015

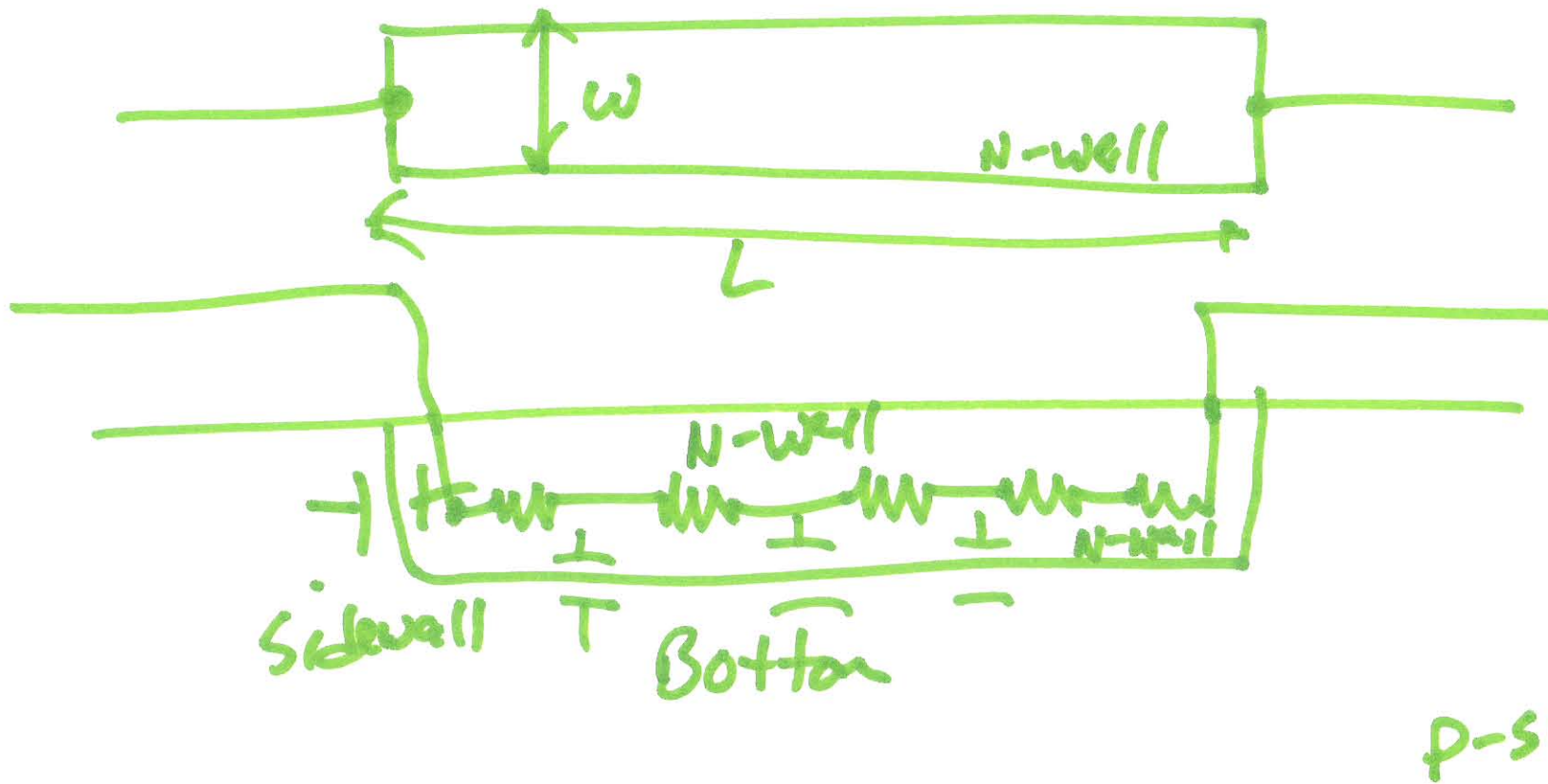
### Lecture 3



$V_{out} = -5e^{-t/4/R}$

1)





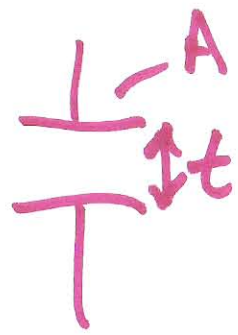
Bottom  $\rightarrow C_{job} = \frac{F}{4\epsilon_0^2}$        $C_{jobc} = C_{job} \cdot w \cdot L$

$C_{io} = C_{jdc} + C_{jsw}$

$C_{jsw} = \frac{F}{4\epsilon_0}$

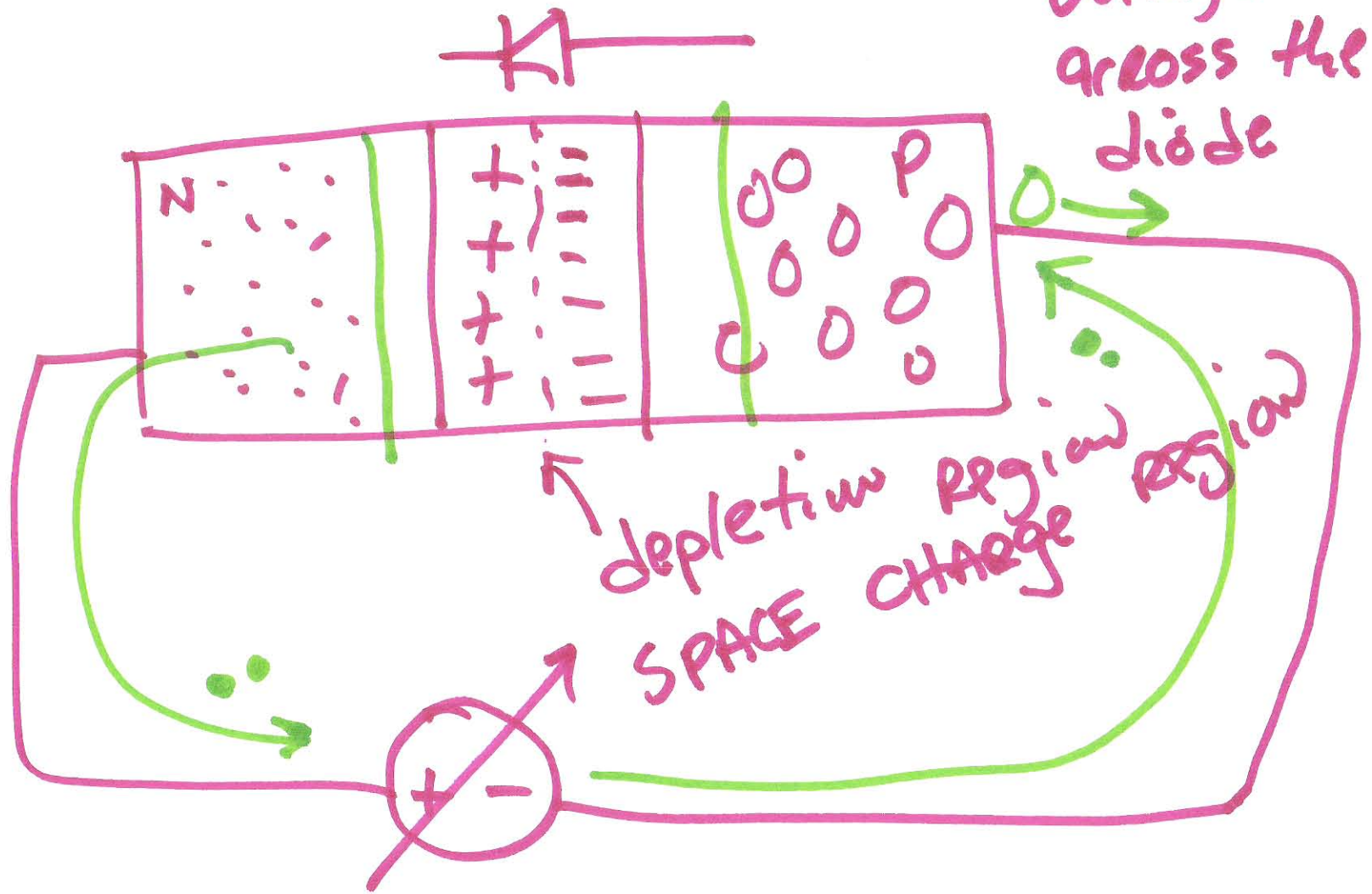
$C_{jswc} = C_{jsw} \cdot (2L + 2w)$   
 perimeter  $\rightarrow$

3)



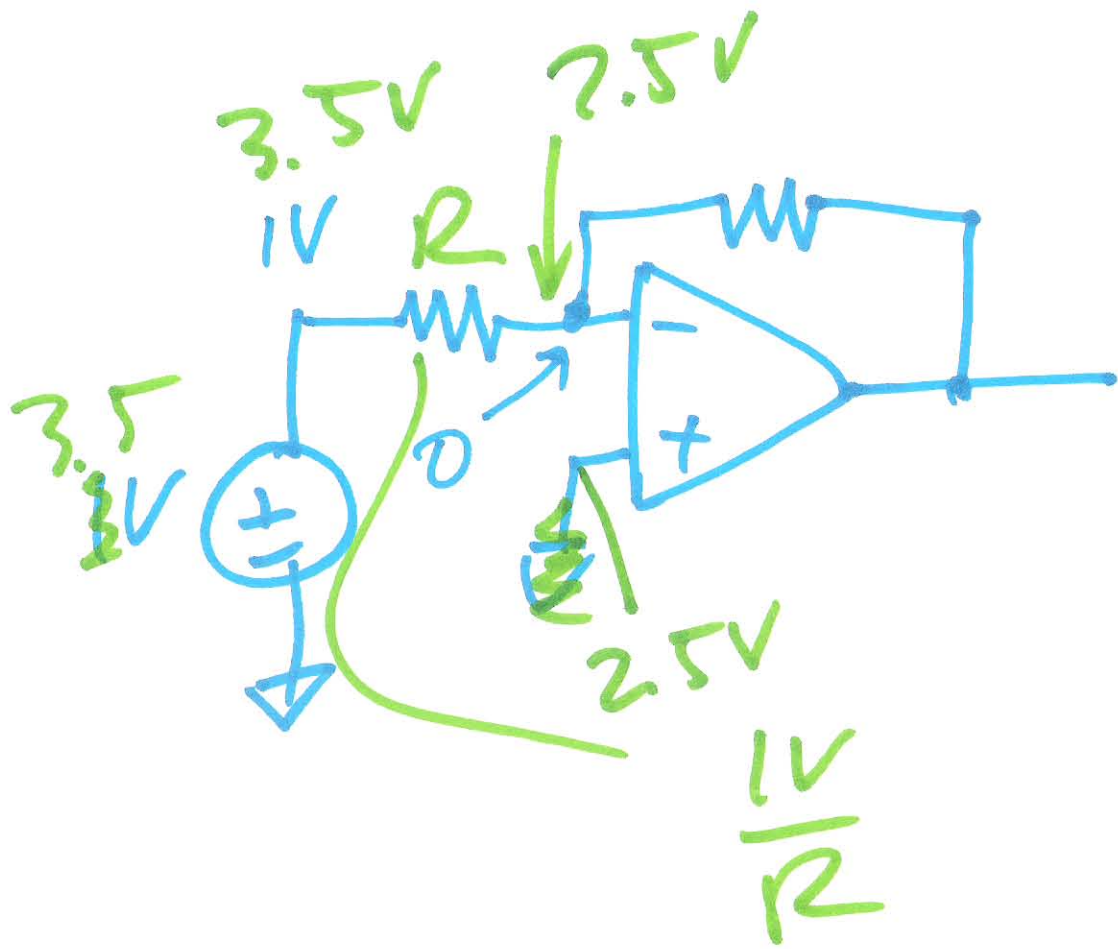
$$C = \epsilon_0 \epsilon_r \cdot \frac{A}{t}$$

$C_{j0} \Rightarrow$  zero voltage across the diode

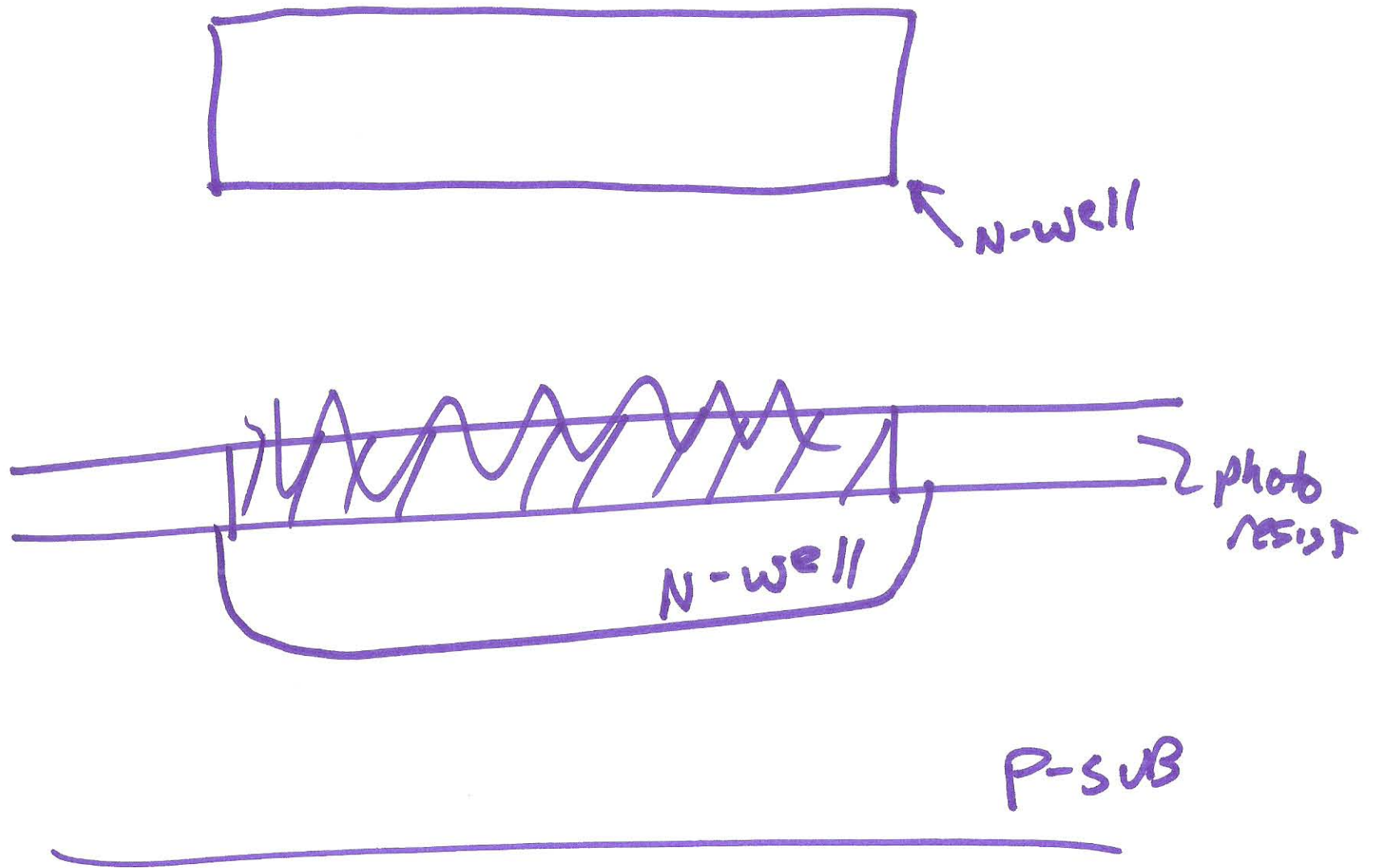


4)

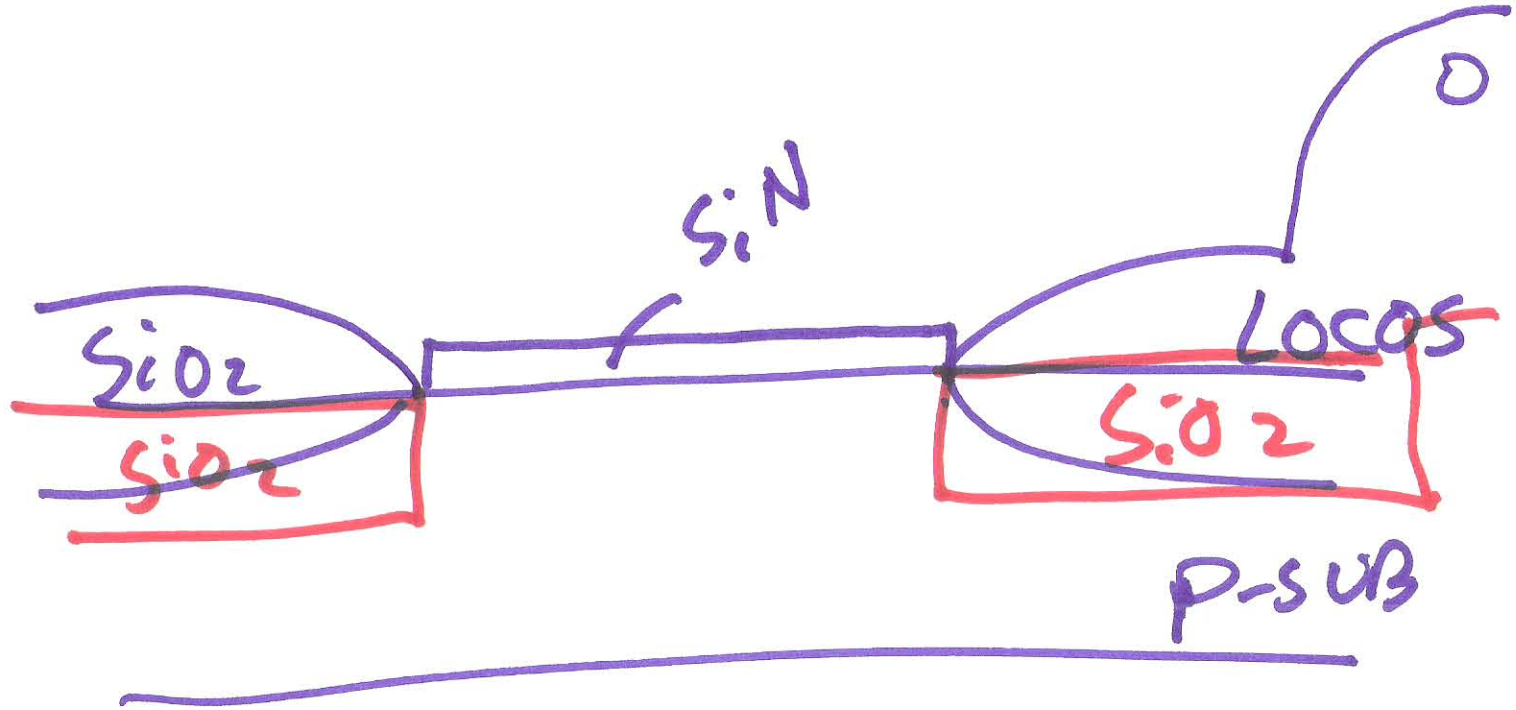




6)

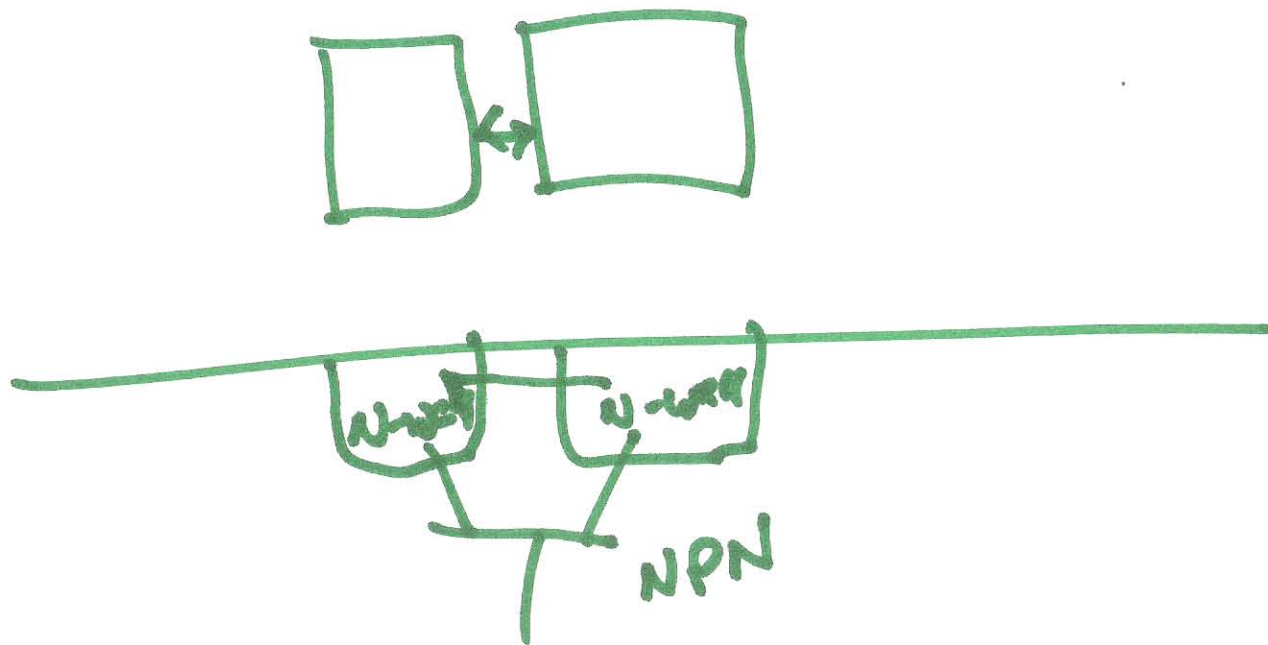


7)



Shallow Trench  
isolation





a)