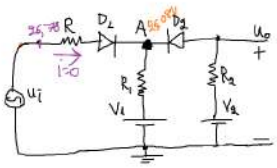
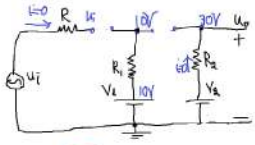
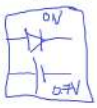
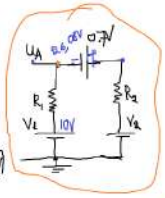
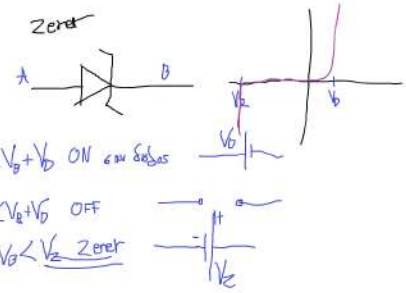


$V_1 = 10V \quad R_2 = 1k\Omega$
$V_2 = 30V$
$R = 3K\Omega$
$R_1 = 5K\Omega$
$V_{D,on} = 0.7V$







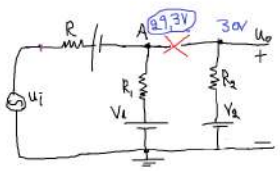


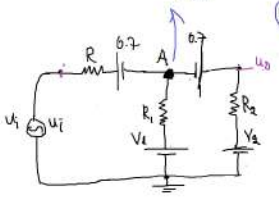
Α1) $U_{i\,min}$ για να άγει η D1?

Α2) $U_{i\,min}$ για να σταματήσει να άγει η D2?

$$U_A = \frac{\frac{V_1}{R_1} + \frac{V_2 - 0.7}{R_2}}{\frac{1}{R_1} + \frac{1}{R_2}} = 26,08V$$

$$U_{i\,min}\Big/_{D_1 ON} = 26,08 + 0.7 = \boxed{26,78V}$$





$$U_{i\,max} = \frac{\frac{U_o - 0.7}{R} + \frac{V_1}{R_1} + \frac{V_2 - 0.7}{R_2}}{\frac{1}{R} + \frac{1}{R_1} + \frac{1}{R_2}} \Rightarrow U_{i\,max} = 41,6V$$