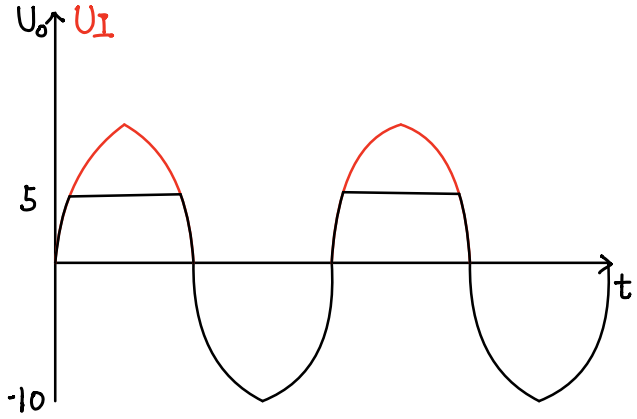
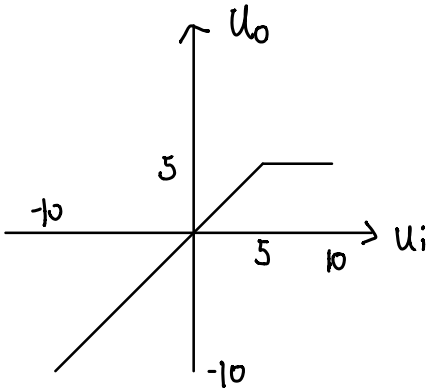
6.(1) $I = \frac{U}{R} = \frac{10-0.7}{5.1}$

得 $I = 1.8\,mA$

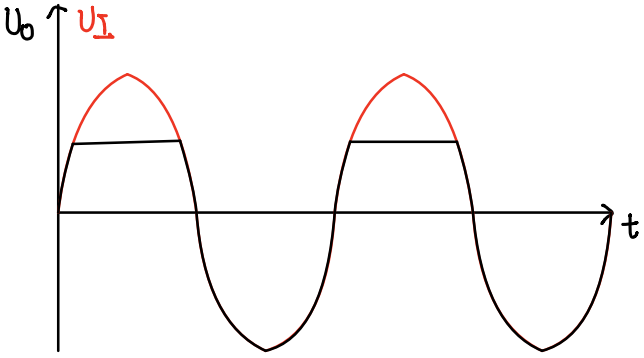
(2) 温度升高，I增大，U_D减小

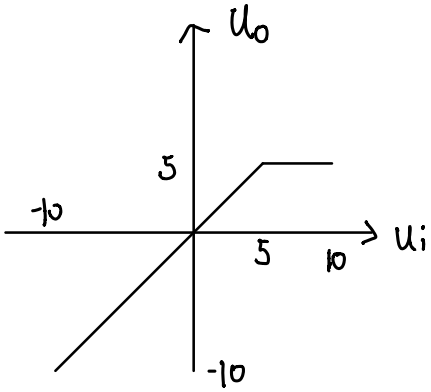
8.a)





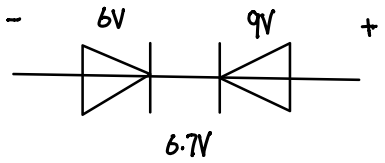
b)

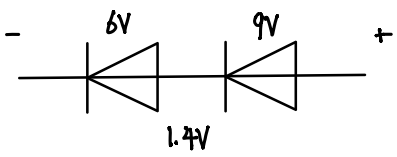


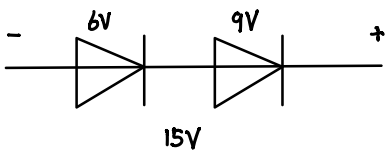


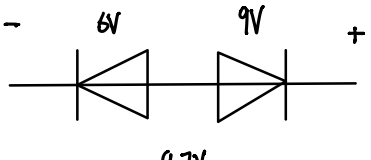
9. ①串联

硅管 $U = 0.7V$

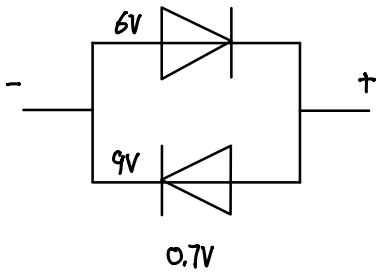


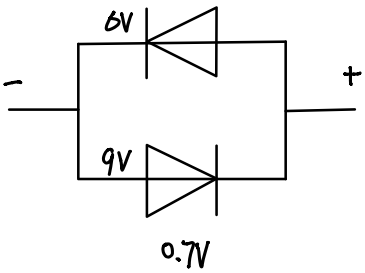


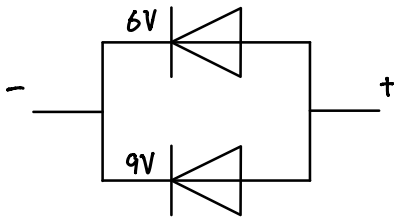




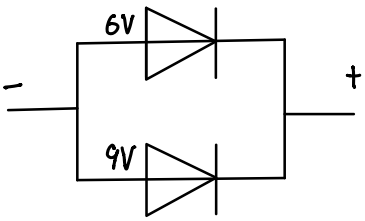
②并联







0.7V



6V

10.(1) $U_I=20V$ $U_L=U_O=6V$ $I_{Zmax}=\frac{200mw}{6V}=0.033A$ $I_{Zmin}=0.01A$ $I_R=\frac{20-6}{500}-\frac{6}{1000}=0.022A$

可正常工作，$U_O=6V$

(2)若 $U_L=U_O=6V$ $I_R=\frac{20-6}{500}-\frac{6}{100}=-0.032A$ 不可正常工作，二极管可相当于导线

$U_O=U_I\times\frac{R_L}{R+R_L}=20\times\frac{100}{100+500}=3.3V$

(3) 设稳压管可正常工作，则 $U_O=6V$ $I_R=\frac{20-6}{500}=0.028A<I_{Zmax}$ 可正常工作

(4) 设稳压管可正常工作，$U_O=6V$ $I_R=\frac{7-6}{500}=0.002A<I_{Zmin}$ 不可正常工作