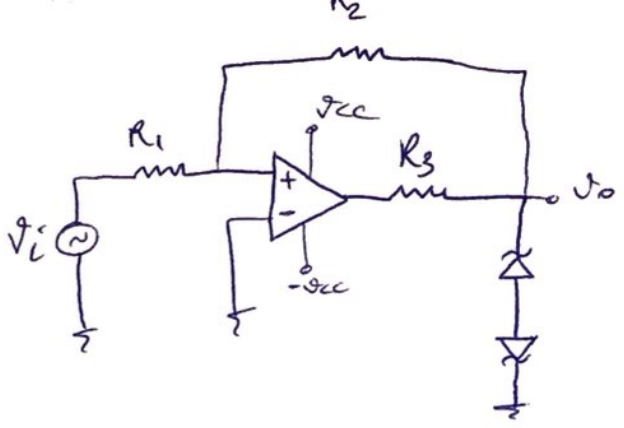
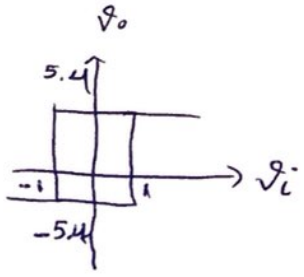
بخش سوم:





LTP = -1

$v_o = v_{oH} \longrightarrow v^+ > v^- = 0$

$$v^+ = \frac{v_i - v_{oH}}{R_1 + R_2} \times R_2 + v_{oH} \longrightarrow LTP = -v_{oH} \times \frac{R_1}{R_2}$$

$$-1 = -5.4 \times \frac{R_1}{R_2}$$

$$UTP = \frac{R_1}{R_2} \times (-v_{oL}) = 1 = 5.4 \times \frac{R_1}{R_2}$$

$R_1 = 1K\Omega$

$R_2 = 5.4K\Omega$

$$\frac{10 - 5.4}{R_3} < 20m \longrightarrow R_3 > 230\Omega$$

$$\frac{10 - 5.4}{R_3} < 5m + 1m \longrightarrow R_3 < 0.76K\Omega$$

$\longrightarrow R_3 \simeq 560\Omega$

$$\begin{cases} R_1 = 1K\Omega \\ R_2 = 5.4K\Omega \\ R_3 = 560\Omega = 0.56K\Omega \end{cases}$$