



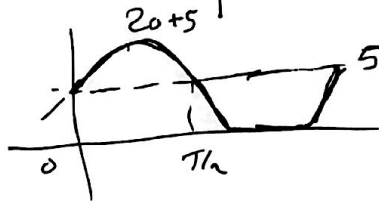
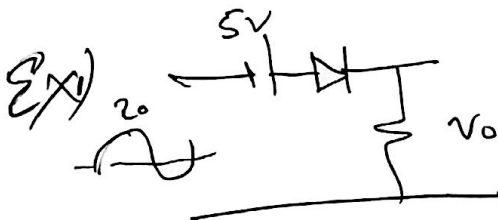
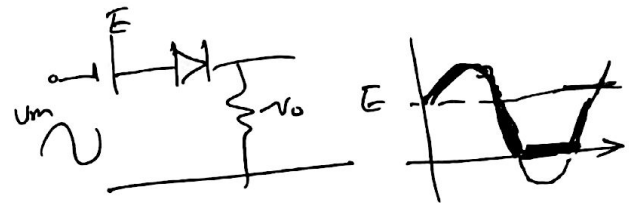
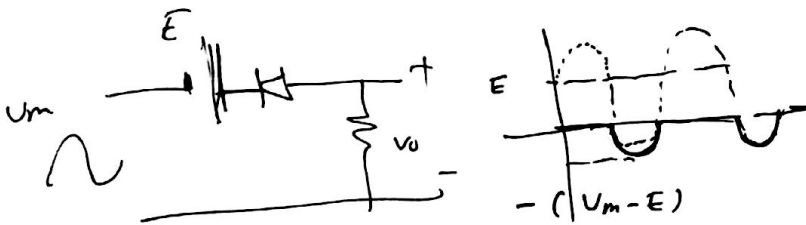
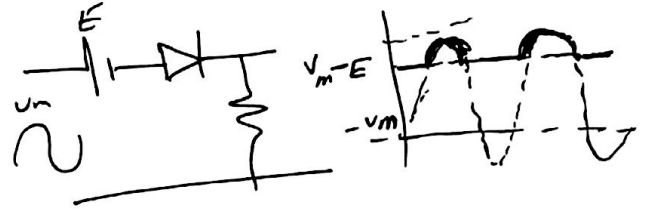
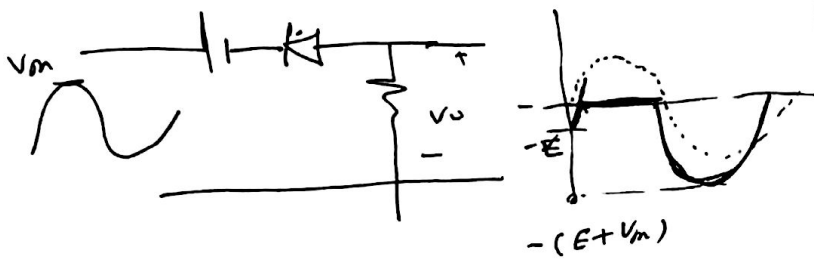
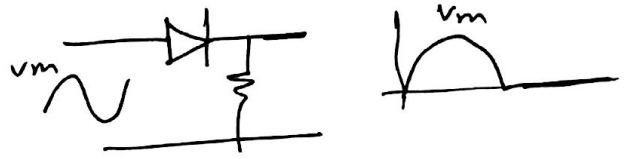
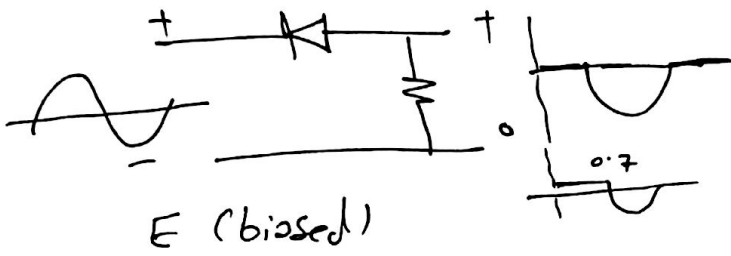
for all assume All diodes idea.

2) clippers (limiters)

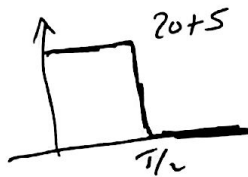
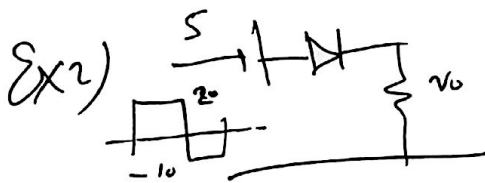
Series clippers

+ve clippers

-ve clippers

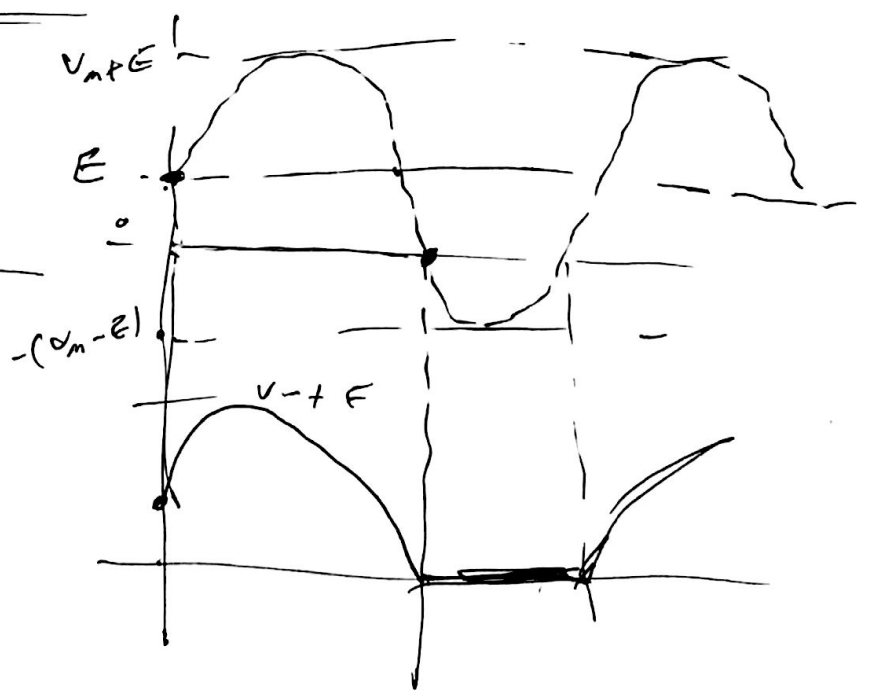
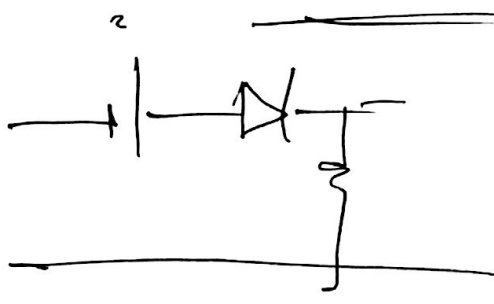
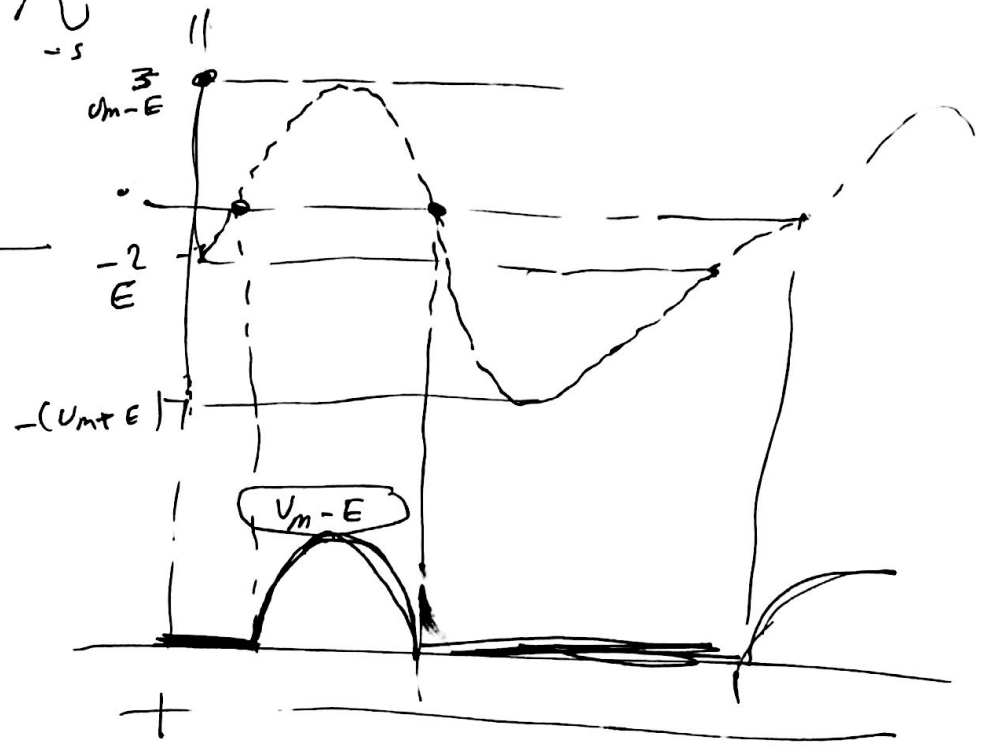
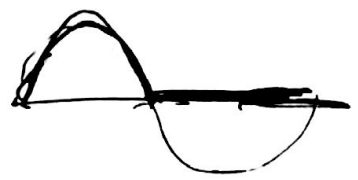


Don ( $V_o = V_i + E = 25$ )  
 Don ( $V_i = -ve$ )



Don  $V_o = V_i + E = 20 + 5 = 25$   
 Don  $V_i = -10 + 5 = -5$   
 $V_o = 0$

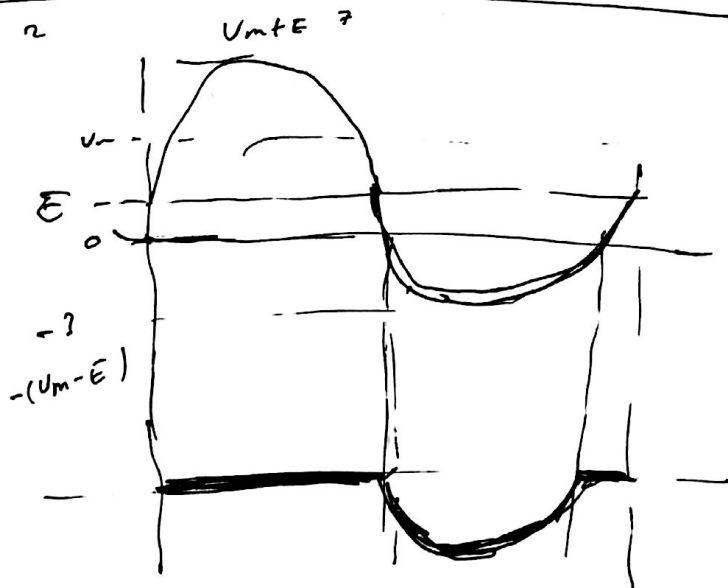
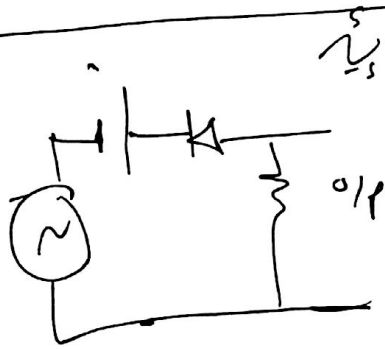
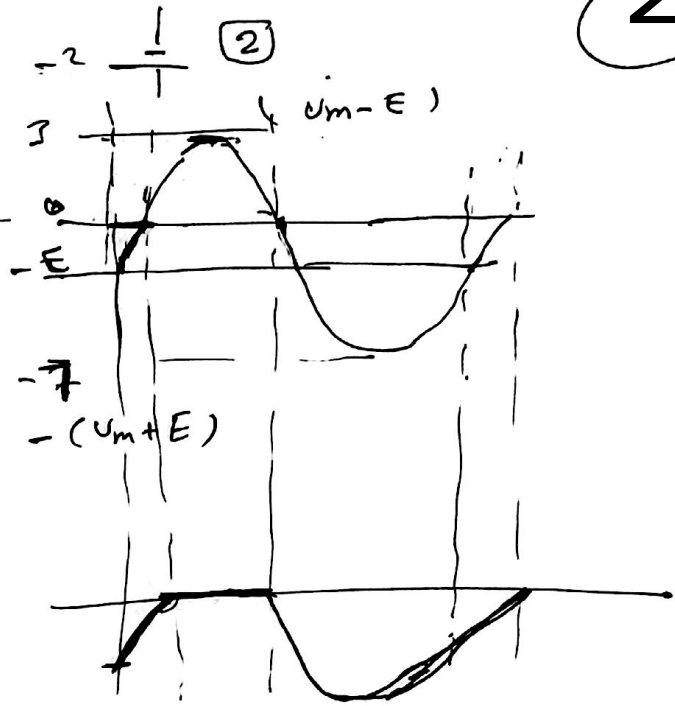
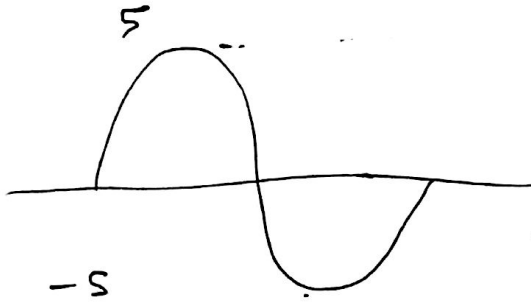
- rec clippr



Handwritten signature or scribble at the bottom of the page.

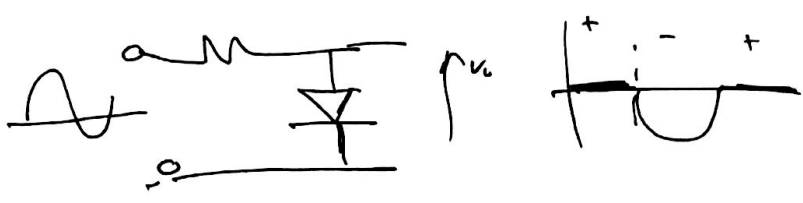
# True Clippers

4



# II Parallel clipper

(\*) ~~negative~~ Positive

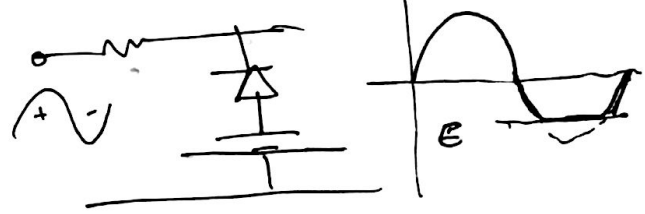
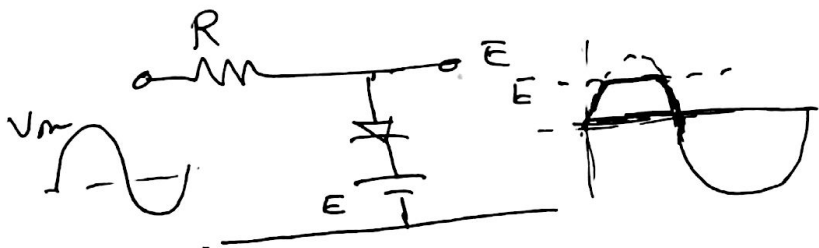


in the half cycle D on (S.C)  $\therefore$  o/p = 0  
 in the half cycle D off (O.C)  $\therefore$  has o/p  $\cup$

negative

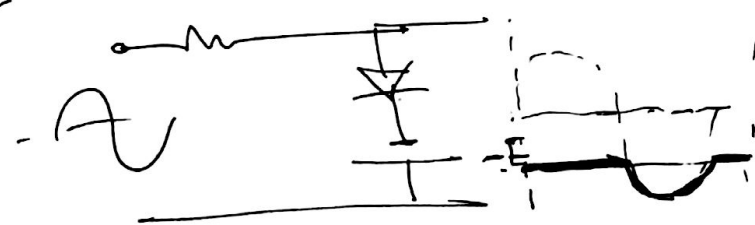
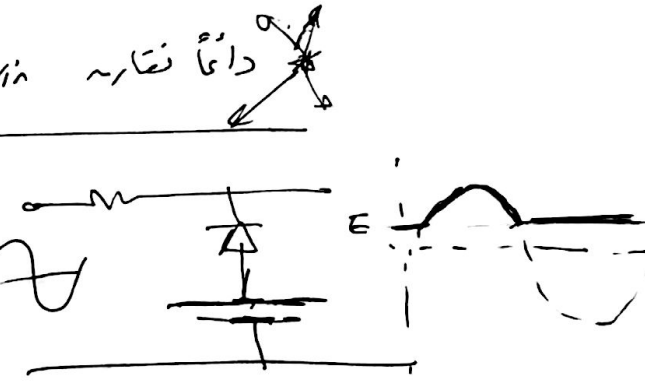


(biased)

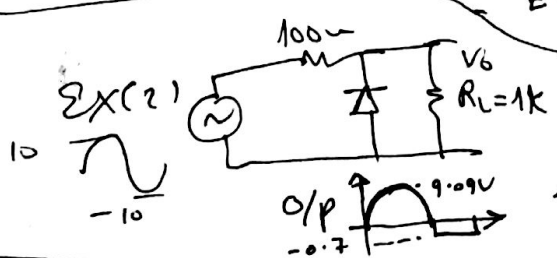
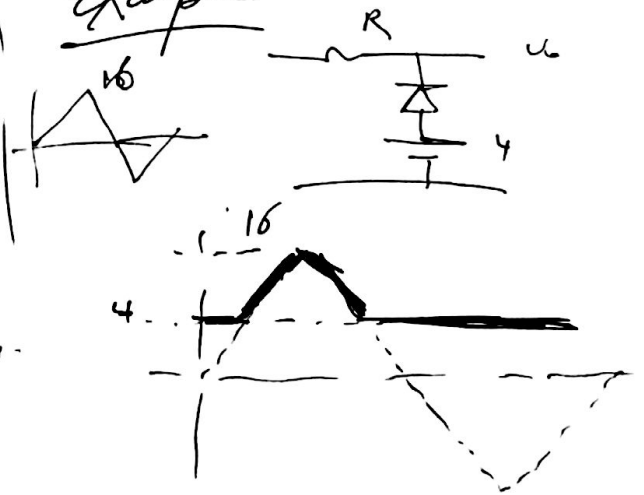


$E > 0$   
 $E < 0$   
 $E = 0$

$E < v_{in}$   
 $E > v_{in}$



Example

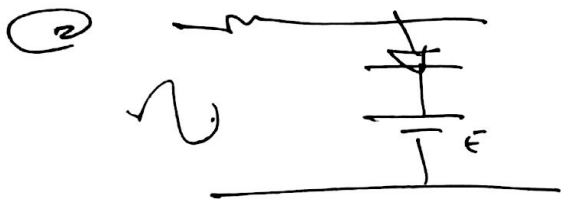
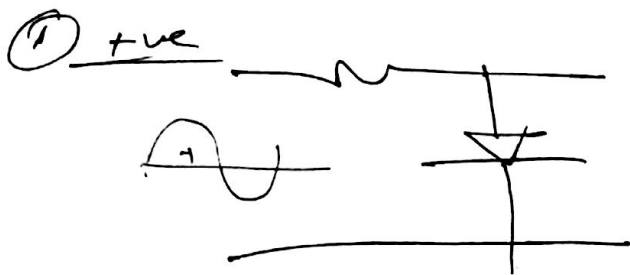


$$V_{out} = \frac{V_{in} R_L}{R_L + R_1} = \frac{1000 \times 10}{1100} = 9.09V$$

$$V_{out}(-ve) = -0.7V$$

# Parallel clippers

(6)



$$V_o = V_{in} - V_R$$

if  $V_{in} > V_E \rightarrow$  Diode (sc)  $V_o = E$   
 if  $V_{in} < V_E \rightarrow$  Diode (oc)  $V_o = V_{in}$

