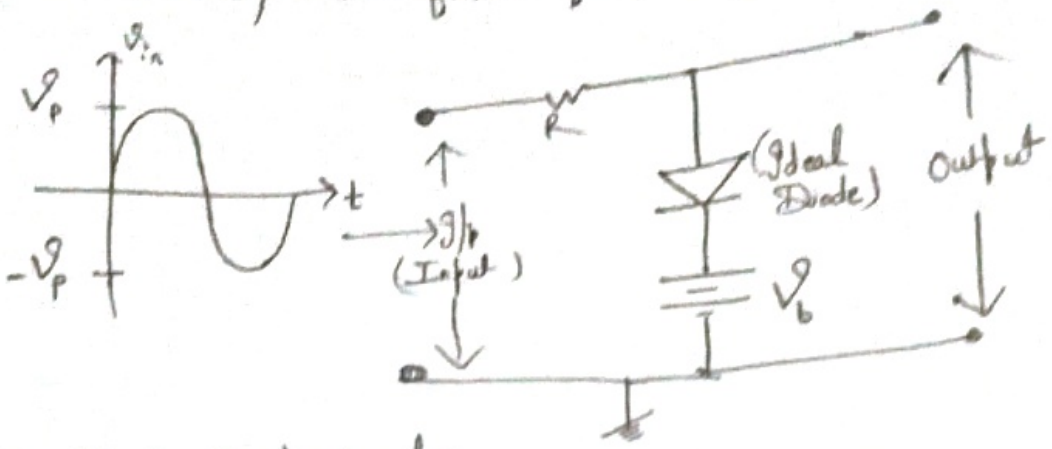
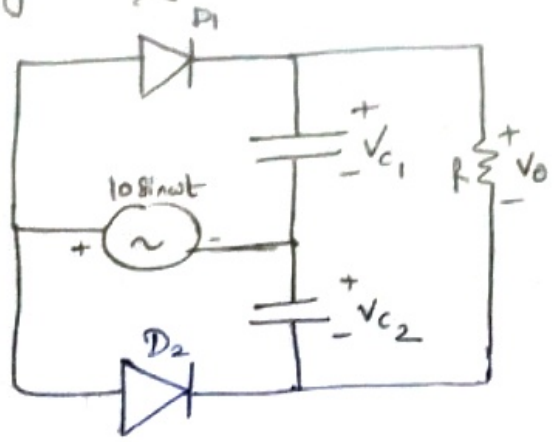
# Tutorial

**Ques1)** Find the output waveform for the given circuit:



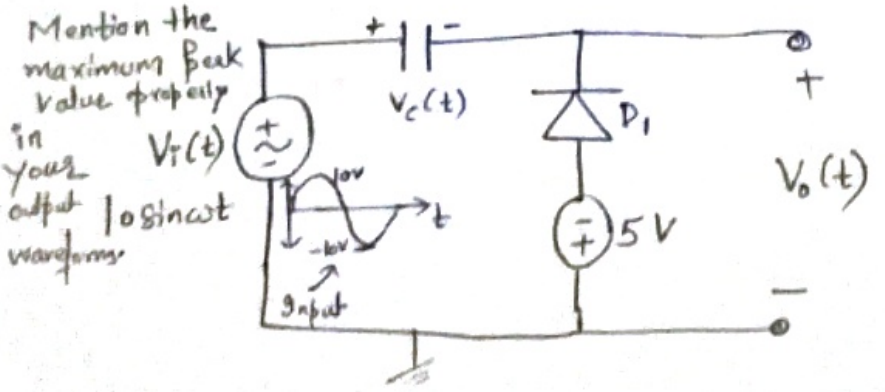

Here $V_p$ is the peak value of Input signal & $V_b$ is the DC voltage.

**Ques2)** Find the steady state value of voltage $V_o$
Assume $D_1, D_2 \rightarrow$ Ideal, $RC \gg T$, $C_1$ & $C_2$ to be Initially uncharged.



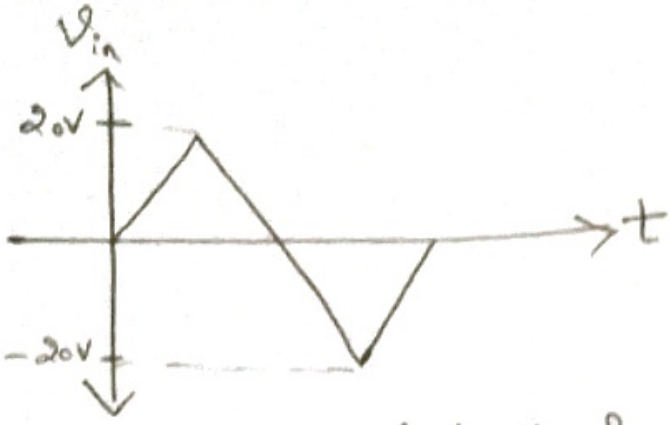

$V_o = ?$

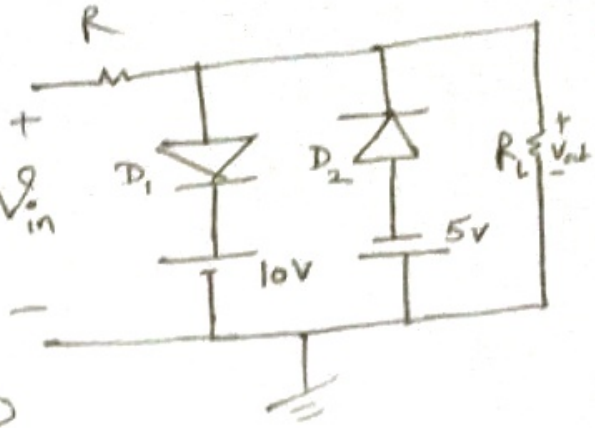
**Ques3)** Plot the transient and steady state output waveforms for $V_o(t)$ & $V_c(t)$ for the following circuit:




$D_1 \rightarrow$ Ideal Diode
Clamper circuit
Time constant Condition valid.

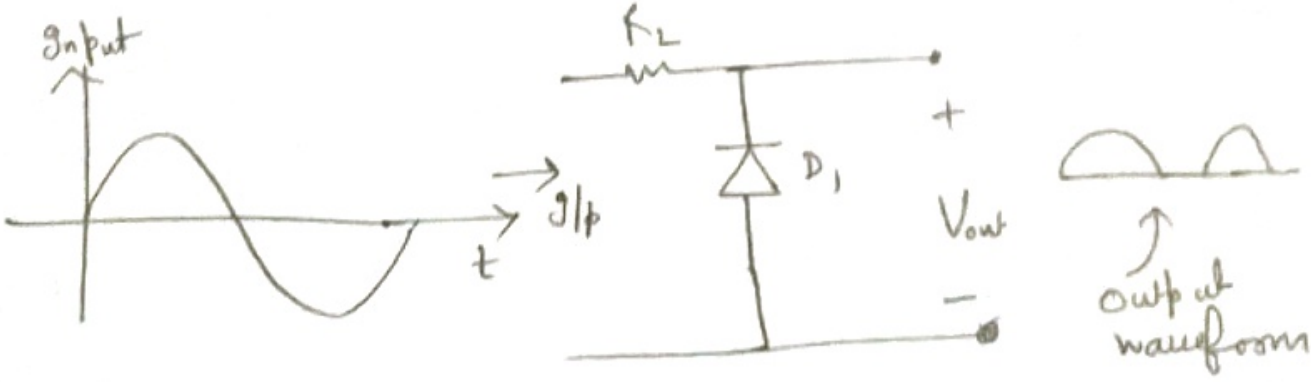
Ques 4) Draw the output waveform for the following Circuit :-




Assume diodes to be of Silicon or Ideal (Your wish).

Ques 5) How the operation of this clipper circuit will be affected as a result of following faults. Take Each fault once at a time, no multiple faults together.




a) Diode $D_1$ fails open
b) Diode $D_1$ fails shorted
c) Resistor $R_1$ fails open
d) Resistor $R_1$ fails short

Also Explain why these faults will occur.