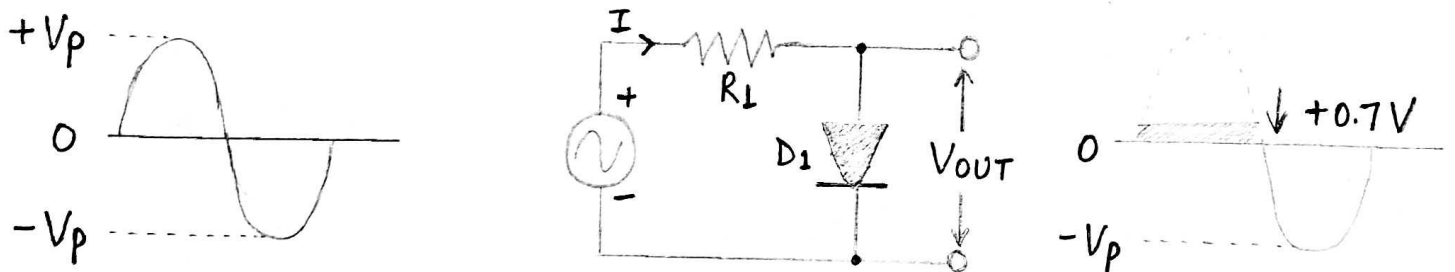


# CLIPPER & CLAMPER CIRCUITS

## Clipper Circuits :-

The clipper circuits are basically used to clip the portion of any input signal without changing or distorting the remaining part of the input waveform.

### POSITIVE CLIPPER CIRCUITS



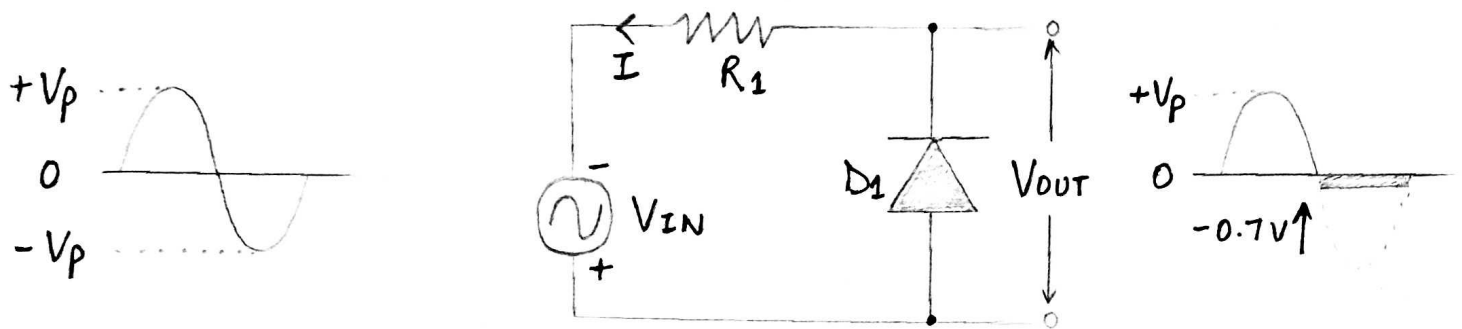
As we see from the above figure the diode is forward biased during the positive half cycle of the input sinusoidal waveform. But the P-N Junction diode starts conducting after it crosses the cut off voltage. As we already know it should be greater than 0.7 volts & 0.3 volts for Si & Ge diodes respectively.

The diode conducts for a complete positive half cycle & maintains the voltage across itself until the sinusoidal waveform falls below the value. As the diode conducts the output here is clipped.

For the negative half cycle the diode becomes reversed biased & a reverse current of very small amount flows across the diode. Hence, we can say

that there is no voltage change in this case due to no flow of current. Therefore, the output is unaltered in this & is equal to the input applied voltage.

### NEGATIVE CLIPPER CIRCUITS



As we see from the above figure the diode is reverse biased during the positive half cycle of the input sinusoidal waveform. But the PN junction diode acts as an open circuit. The output in this case is equal to the input applied voltage.

for the negative half cycle the diode becomes forward biased & starts to conduct. Hence, we can say that there is no voltage at the output due to no flow of current.

### CLIPPING OF BOTH HALF CYCLES

