SUBJECT: BASIC ELECTRONICS

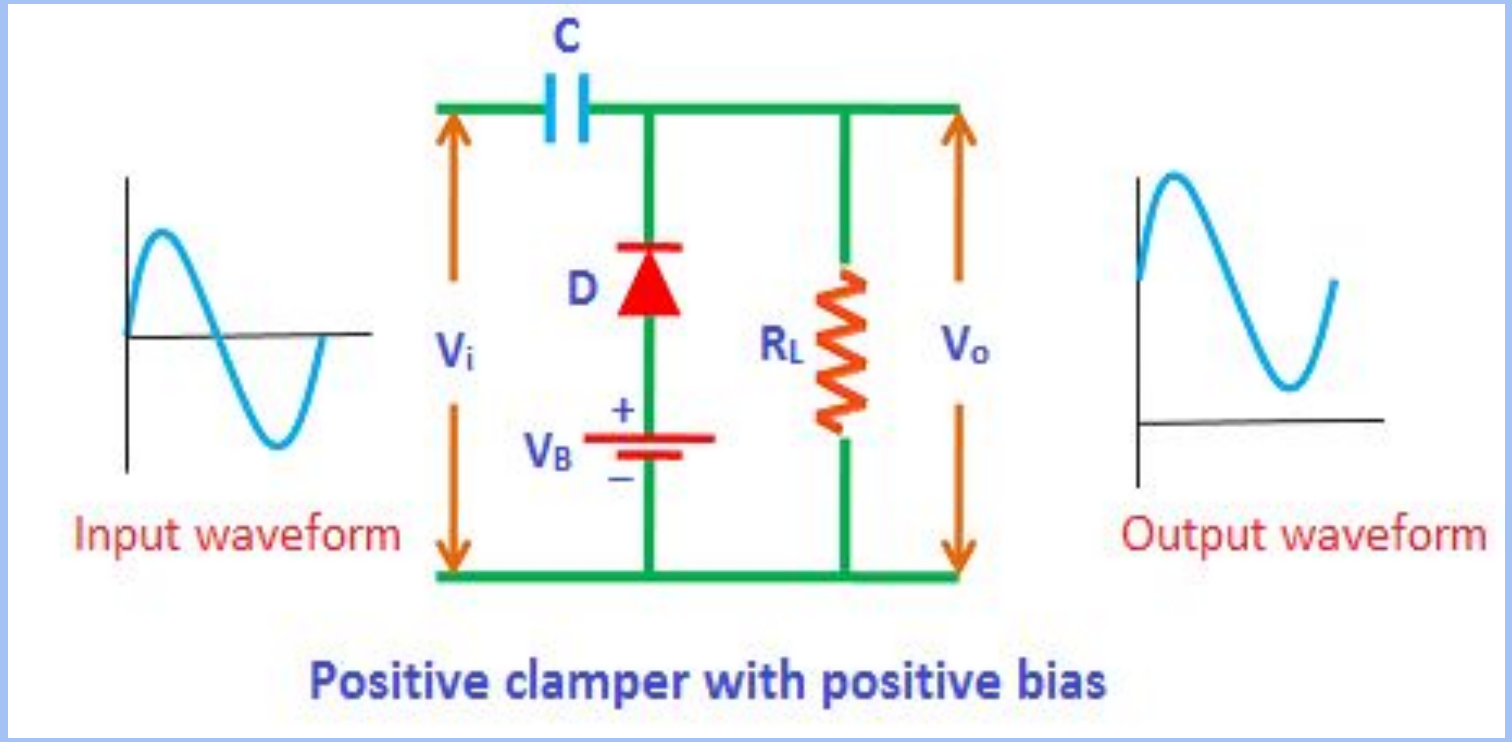
Positive Clamper with Positive Bias

Elementrix Classes

Positive Clamper with Positive Bias

- A positive clamper with positive bias refers to a clamping circuit that shifts the entire AC waveform of an input signal in the positive direction and introduces an additional positive DC bias. This positive bias is achieved by adding an external positive DC voltage source.

- If positive biasing is applied to the clamper then it is said to be a positive clamper with positive bias. The positive clamper with positive bias is made up of an AC voltage source, capacitor, diode, resistor, and dc battery.


C
D
Vi
RL
Vo
+
VB
−
Input waveform
Output waveform
Positive clamper with positive bias

- **During positive half cycle:**

During the positive half cycle, the battery voltage forward biases the diode when the input supply voltage is less than the battery voltage. This current or voltage will flows to the capacitor and charges it.

When the input supply voltage becomes greater than the battery voltage then the diode stops allowing electric current through it because the diode becomes reverse biased.

❖ During negative half cycle:

During the negative half cycle, the diode is forward biased by both input supply voltage and battery voltage. So the diode allows electric current. This current will flows to the capacitor and charges it.

पढ़िए और पढ़ाइये

SUBSCRIBE, SHARE, COMMENT