Connection from circuit in figure (7) was showing that diode (D_1) was reverse biased by the input supply, the input wave form was clipped with the reference level of -2.4 volts which means the top part of the wave was removed and remained with only the small bottom part, during this period diode (D_2) acted as an open switch. During the negative half cycle diode D_2 was forward biased by both the input supply voltage and battery voltage as a result the negative half cycle was removed at the output with reference level of clipping +2.0 volts during this period diode D1 acted as an open switch. Due to the change of polarity of the A.C power supply it showed that only the central part was being clipped. The bottom part had a smaller clip than the top due to the magnitude of the batteries as shown in fig 15 below.

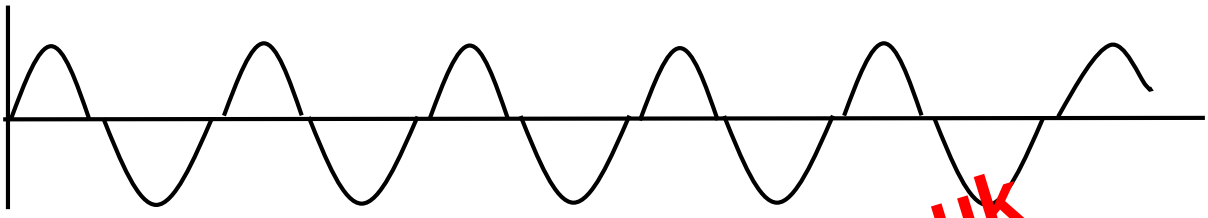

Figure 15: Showing output waveform clipped at the center portion.

TRANSFER CHARACTERS

1. **DIODE SHUNT CLIPPING ABOVE VR OR POSITIVE PEAK CLIPPING (FIGURE (1)).**
   From the experiment it was noticed that when voltage was below +1.8 there was no clipping unless the voltage was above +1.8 volts.

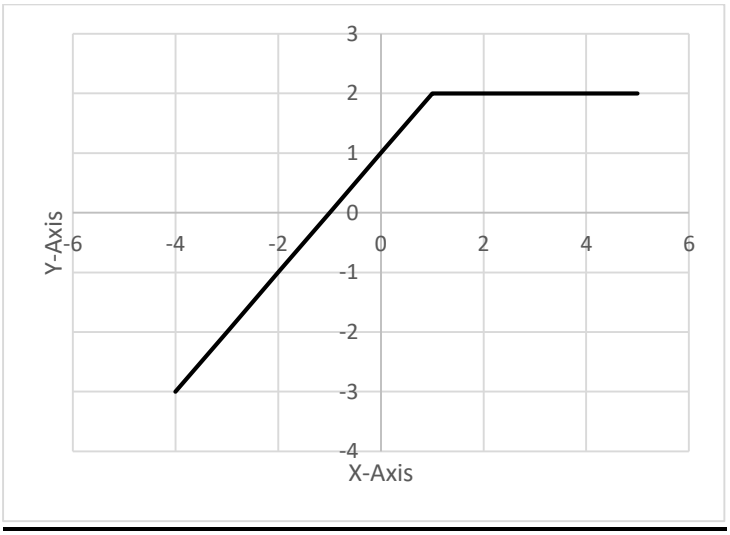

Figure 16: Showing transfer characteristics of circuit 1.

References

Malvino, A. P., & Bates, D. J. (2016). *Electronic Principles* (8 ed.). New York: McGraw-Hill Education, Penn Plaza.

Mlatho, J. S. (2018). *Practicals in Analog Electronics.* Zomba: Chancellor College.

https://www.electronics-tutorials.ws/diode/diode-clipping-circuits.html

https://www.physics-and-radio-electronics.com