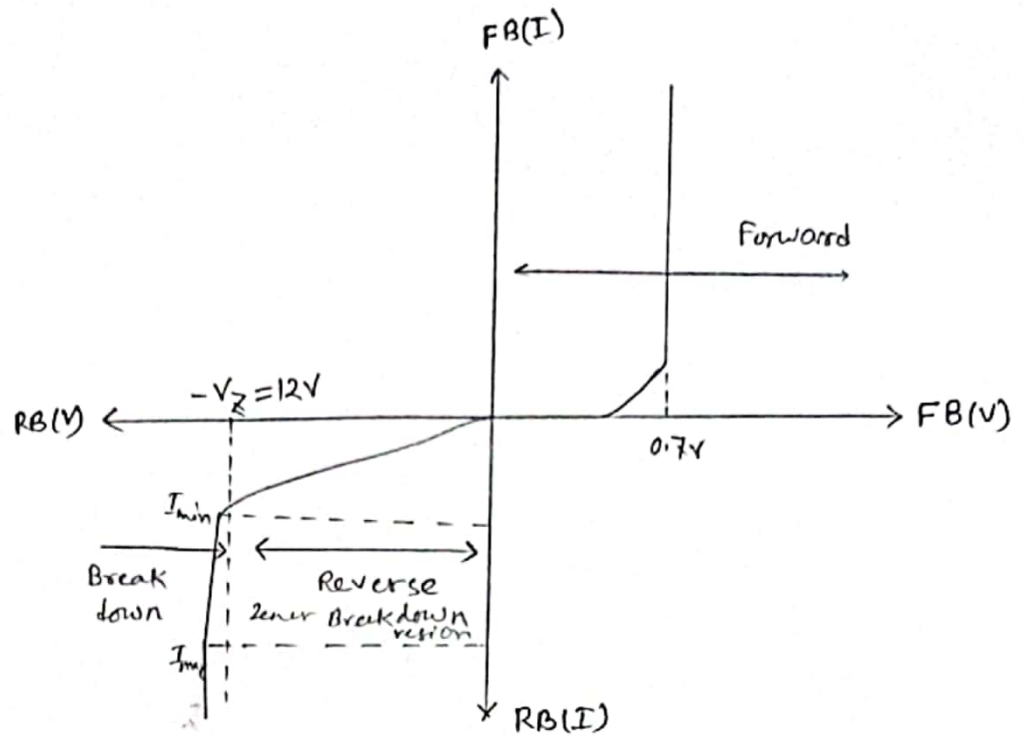


PART-1

1.



Graph: Full Characteristics of Zener diode with reverse breakdown voltage of 12V.

2. Differences between normal diode and Zener diode.

Normal diode

1. It allows current in only one direction.
3. It gets damaged in reverse biased.
3. It's doping intensity is low.
4. It is used in rectifiers, clippers, clamps etc.

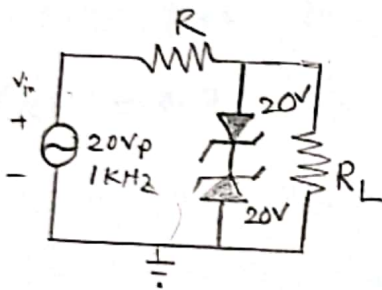
Zener Diode

1. It can conduct in both forward and reverse biased.
2. It can operate without getting damaged.
3. It has high doping intensity to achieve sharp breakdown.
4. It is mostly used in voltage regulation.

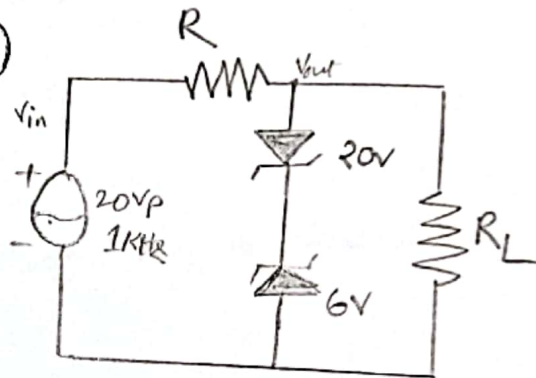
3. Applications of the Zener diode are

- Ⓐ used to shift voltage.
- Ⓑ used as voltage regulator.
- Ⓒ used to protect from over voltage or surge suppressor.
- Ⓓ used in clipping circuits.

1. Ⓐ



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