DE test 01/08/24

* 1. C
  2. C
  3. A
  4. C
  5. C

2.1 0.7 V

2.2 In waveform rectifier circuits

2.3

2.4

2.5 Silicon circuit Rectifier

2.6 One use is as a regular diode in very high power circuits and another is in the quizmaster DE PAT to make sure that current may flow through a part of the circit after a trigger signal has been sent

3.1 4

3.2 One way is by Giving the trigger a signal powerful enough to turn it on and another is by overloading it and giving it more than its breakdown voltage. Although this will break it and is unconventional

3.3

3.4

4.1 The function of a diode is the limit current flow in one direction

4.2 A diode should be connected in series biased in the same direction of the forward polaroty

4.3 If done correctly then the current will only flow in one direction exept for negligible leakage in the direction of reverse bias

4.4 Their will be no current.

4.5

5.1 5V

5.2 The difference between a Zener diode and a regular diode is that in a regular diode when enough voltage is given in reverse biased it will breakdown and become more conductive. This break is often permanent ruining the diode and is not predictable. In a Zener diode when enough voltage is applied in reverse biase it will also break however this is not permanent and happens at a specified voltage.

5.3 Due to the nature of the Zener diode It will only ever have less than or equal to a specific voltage across it. This means that when a given load is placed in parallel with it the load may only ever have less than a specific voltage Aswell.

5.4

IN the example the voltage across the load will be the same as the voltage across the Zener diode because they are in parallel. and because the voltage will always be in reverse polarity and greater than the breakdown voltage their will be a constant voltage across the Load.

6.1