

Semiconductor Electronics : Materials, Devices and Simple Circuits



TRY YOURSELF

ANSWERS

1. The valence band consists of the electrons that lie in the outermost shell or valence shell of the atom.
2. The conduction band consists of the free electrons that take part in the process of conduction.
3. Semiconductor doped with impurity atoms and having high conductivity.
4. In n-type semiconductor, the electrons are majority charge carriers and in p-type semiconductor, the holes are majority charge carriers.
5. When positive terminal of battery is connected to p-region and negative terminal to n-region of semiconductor.
6. The contacts of voltmeter have some resistance will not accurately measure the voltage across the potential barrier. Thus, it is not possible to measure the voltage across the potential barrier.
7. A rectifier is an electrical component that converts alternating current to direct current.
8. The importance of peak inverse voltage is in the reverse bias condition of the diode, because, if this value exceeds the diode might get damaged.
9. Peak Inverse Voltage (PIV) or Peak Reverse Voltage (PRV) means to the maximum voltage a diode or device can withstand in the reverse-biased direction before breakdown voltage.

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