EI CLASS(508) BASIC ELECTRICAL COMPONENTS

1. Diode
2. BJT
3. MOSFET
4. CMOS
5. OP-Amps

Conventional current (+ve to -ve)

Practically (-ve to +ve)

When the distance between the valence band and conduction band

* Is less – acts as a conductor
* Is high – acts as an insulator
* When minimal and requires external force for movement – acts as semiconductor
* In semiconductors the threshold voltage differs for different elements doped with (e.g: for Si is 0.7V and for Ge is 0.3V)
* Doping – addition of impurities to a pure semiconductor to maintain electrical conductivity
* P type semiconductor – contains holes
* N type semiconductor – contains electrons
* Depletion region – the junction where the electrons and holes diffuse and recombine by neutralizing the charge while leaving behind the fixed charged ions
* Rectifier – converts AC to DC
* It is formed using diodes
* Half – wave rectifier:
* It is not effective as it takes only the positive half of the cycle while leaving behind the negative half of the cycle.
* Full – wave rectifier:
* It considers both half of the cycle.

