**Home Assignment -2**

1. Why are indirect band gap semiconductors not suitable for light-emitting devices like LEDs?
2. What is the impact of reverse bias on the performance of a photodiode?
3. Why is an antireflective coating applied to solar cells?
4. What is the key difference between LEDs and solar cells?
5. What is the fill factor (FF) in solar cells?
6. What assumptions are made in the van der Pauw method?
7. How can the hot-point probe method identify the doping type in semiconductors?
8. What does the sensitivity of a sensor indicate?
9. What is a passive sensor?
10. Give one example of an active sensor.
11. What physical quantity do piezoelectric sensors measure?
12. What is the key material used in metal-based thermal sensors?