

Physics Lab VIVA QUESTIONS

1) I-V Characteristics of a Zener Diode

1. What is dropping?
2. What is avalanche breakdown?
3. What is zener breakdown?
4. What do you mean by voltage regulator?
5. Where do we use zener diodes?

2) Four Probe Technique

1. What is resistivity?
2. Why do we use 4 probes in this experiment? Why not just two probes?
3. Relationship between resistivity and temperature for metals, semiconductor and insulators?
4. What is bulk resistance?

3) Newton's Rings

1. What is interference?
2. What is least count of an instrument?
3. Condition for constructive and destructive interference?
4. What is radius of curvature?

4) Dielectric constant

1. What is a dielectric material?
2. What is polarization?
3. Types of polarization
4. What are dipoles?

5. What is a capacitor?
6. Explain how a capacitor charges and discharges?
7. What is the role played by the resistor in the circuit?

5) Young's Modulus by Uniform Bending

1. What is stress?
2. What is strain?
3. What is elasticity?
4. What do you mean by cantilever?
5. What is elevation?
6. What is Young's modulus?
7. What do we understand by knowing Young's modulus of a material?

6) Photo Diode Characteristics

1. What is a photodiode? How does it work (principle)
2. What is reverse saturation current?
3. Where do we use photodiodes? What do you mean by responsivity of a photodiode?

7) Diffraction Grating

1. What is diffraction?
2. Types of diffraction?
3. What is wavelength?
4. What is grating constant?
5. Bragg's law (statement)

8) Planck's constant

1. What is radiation?
2. What is wavelength?
3. Mention the assumptions made by Planck in designing the radiation law.
4. What is the SI unit of Planck's constant?
5. How does an LED Work?

9) Series and Parallel LCR Circuits

1. What is an inductor?
2. What is a capacitor?
3. What is a resistor?
4. What is resonance (general definition)
5. What is eddy current?
6. How to avoid eddy currents?
7. What is bandwidth?(definition)
8. What is quality factor?(definition)
9. What does the sharpness of the resonance curve indicate?
10. Where do we use series and parallel resonance circuits?

10) Characteristics of a Transistor

1. What is a transistor?
2. Types of transistors.
3. What is the relationship between the dropping concentration in a transistor?

4. What are alpha and beta?

5. Applications of transistor