

## Electronic Device and Circuits - Lab Viva Questions

### ELECTRONIC DEVICES AND CIRCUITS LABORATORY

#### Viva – questions

#### **SEMICONDUCTOR DIODE AND ZENER – DIODE**

1. Define knee voltage of a diode.
2. Draw VI characteristics of pn junction diode.
3. Although zener diode is operated in the reverse breakdown region, but it does not burn. Why?
4. Differentiate between static and dynamic resistance of a diode.
5. Differentiate between avalanche and zener breakdown.
6. Draw the VI characteristics of an ideal diode.

#### **Transistor characteristics – CB, CE and CC**

1. Draw the circuits of CB, CE and CC configurations using npn transistor.
2. What is the necessity of heat sink?
3. Compare the features of the three transistor configurations.
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5. Why is base made thin and lightly doped?
6. Explain why an ordinary transistor is called bipolar.
7. Why is transistor called a current controlled device ?
8. Why is collector region is greater than emitter region?

#### **FET (FIELD EFFECT TRANSISTOR )**

1. Draw the basic structure of an N channel junction field effect transistor.
2. Why is FET known as a unipolar device?
3. What are the advantages and disadvantages of JFET over BJT?

4. What is a channel?
5. Distinguish between JFET and MOSFET.
6. Draw the symbol of JFET and MOSFET.
7. What are the two modes of MOSFET?
8. Define pinch-off voltage

### **UJT ( UNIJUNCTION TRANSISTOR )**

1. Define latching current.
2. Define holding current
3. Define drain resistance
4. .Define inter-base resistance
5. What is amplification factor
6. What is the other name of UJT?
7. Derive intrinsic stand off ratio.
8. Draw the equivalent circuit of UJT.

### **SCR, DIAC and TRIAC**

1. What are the advantages of SCR and TRIAC?
2. What is the advantage of SCR?
3. What is the difference DIAC and TRIAC?
4. Draw the equivalent circuit of TRIAC and DIAC.