**Reg. No. :** | | | | | | | | | | |

## Question Paper Code: 42407

B.E. / B.Tech. DEGREE EXAMINATION, AUGUST 2021

Second Semester

Electronics and Communication Engineering

14UEC207 - ELECTRONIC DEVICES

(Regulation 2014)

Duration: 1:45 hour Maximum: 50 Marks

PART A - (10 x 2 = 20 Marks)

**(Answer any ten of the following questions)**

1. Draw the energy band structure of semiconductor.

2. Give the relation for concentration of holes in the n-type material?

3. What is zener breakdown?

4. Define transition capacitance.

5. State the relation between $\alpha$ and $\beta$ of a transistor.

6. Write short note on leakage current in Common Base configuration.

7. List out the differences between JFET and BJT.

8. Define Pinch off voltage (Vp).

9. What is DIAC?

10. Define Break over voltage of SCR.

11. What is meant by doping in a semiconductor?

12. Define the term conductivity in a semiconductor.

13. Define peak inverse voltage in a PN Junction Diode.

14. Write short note on avalanche breakdown.

15. State the relation between $\alpha$ and $\beta$ of a transistor

PART – B (3 x 10= 30 Marks)

**(Answer any three of the following questions)**

16. Explain the classification of semiconductor. (10)

17. Explain the effect of temperature on PN junction diodes. (10)

17. Describe the following configuration and its characteristics (i) Common base configuration (ii) Common emitter configuration. (10)

14. With the help of suitable diagrams explain the working of different types of MOSFET. (10)

15. With neat sketch explain the principle of Uni Junction Transistor (10)