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Question Paper Code: 32407

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

Second Semester

Electronics and Communication Engineering

01UEC207 - ELECTRONIC DEVICES

(Regulation 2013)

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. Define the term conductivity in a semiconductor.
3. What is Zener breakdown?
4. Write short note on avalanche breakdown.
5. When does a transistor act as a switch.
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 (V_p).
9. What is DIAC?
10. List out any four applications of Photodiode.
11. Define semiconductor.
12. Give the relation for concentration of holes in the n-type material?
13. What is zener breakdown?

14. Define transition capacitance.
15. State the relation between α and β of a transistor.

PART – B (3 x 10= 30 Marks)

(Answer any three of the following questions)

16. Explain the drift and diffusion currents for semiconductor. (10)
17. Explain the working of a PN junction diode under various biasing conditions using the relevant circuit sketch. (10)
18. Explain in detail the input and output characteristics of Common Base Transistor. (10)
19. Explain the operation, Drain and transfer characteristics of N-channel JFET. (10)
20. Explain the characteristics of TRIAC. (10)