

Roll No. ....

Total Pages : 2

**BT-3/D-21**

**43087**

**ELECTRONIC DEVICES**

**Paper-ECE-203-N**

Time : Three Hours]

[Maximum Marks : 75

**Note :** Attempt *five* questions in all, selecting at least *one* question from each unit.

**UNIT-I**

1. Write short note on :
  - (a) Carrier Drift.
  - (b) Carrier Diffusion.
  - (c) Mobility and Resistivity.
  - (d) Hall Effect. (15)
  
2. Write short note on :
  - (a) Space charge width.
  - (b) Depletion and Diffusion Capacitance.
  - (c) Small signal model of PN Junction diode. (15)

**UNIT-II**

3. Draw and explain the operative principle of BJT. Explain the relation between output and input current of BJT for common base, common emitter and common collector configuration. (15)

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4. Draw and explain H parameters and PI model of CE Transistor. (15)

### UNIT-III

5. With help of neat sketches and characteristics explain the operation of junction FET. (15)
6. Write short note on :  
(a) Two terminal MOS structure.  
(b) Basic MOSFET operation and its small signal model. (15)

### UNIT-IV

7. With neat sketch explain the working of Op-Amp Series voltage regulator. (15)
8. Write short note on complete power supply and SMPS. (15)

