

Roll No.

Total Pages : 02

BT-3/D-19

33087

ELECTRONIC DEVICES

ECE-203-N (Opt. I)

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 notes on the following :

- (a) Carrier Drift
- (b) Carrier Diffusion
- (c) Mobility and Resistivity
- (d) Hall Effect.

15

2. With construction and working principle explain V-I Characteristics of Tunnel diode and schottky 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

4. Write short notes on the following :
- (a) Base width modulation
 - (b) Current crowding
 - (c) Ebers moll model. 15

Unit III

5. What is MOSFET ? Explain the construction and characteristics of N channel MOSFET with suitable diagram. 15
6. Write short notes on the following :
- (a) Pinch off voltage
 - (b) Channel length modulation
 - (c) Velocity saturation effect. 15

Unit IV

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