# 2008 SRM UNIVERSITY

**B.TECH II SEMESTER DEGREE EXAMINATIONS**

**ELECTRONICS DEVICE**

**(ELECTRICAL AND ELECTRONICS ENGINEERING)**

DECE 2008

TIME:3 HOUR
MARK:100

**ANSWER ALL QUESTIONS**

**PART-A(10*2=20 MARKS)**

1.State Einstein law of semi conductor.

2.Define:Mobility.

3.Compare LED and PN junction diode.

4.Define :Tunneling effect.

5.State different operating regions of transistors.

6.Draw h-parameter equivalent circuit for CB configurations.

7.Define pinch off voltage.

8.Compare D-MOSFET and E-MOSFET

9.What is the used for heat sink?

10.Draw the structure and symbol of DIAC

**.PART-B(5*16 = 80MARKS)**

11.a.i Describe semiconductor and its classifications.

ii Draw and explain the energy band diagram of extrinsic semiconductors.

(OR)

b.Explain briefly (i)Drift current (ii) Diffusion current

12.a. Explain the following devices(i)PIN diode(ii)LDR

(OR)

b. Draw and Explain VI characteristics of zener diode.

13.a.Explain biasing and working of NPN transistor.

(OR)

b.Draw low frequency hybrid p-model of transistor and explain its each terms.

14.a.Explain the construction and working of power MOSFET.

(OR)

b.Explain the operation of UJT and Draw its characteristics.

15.a. Explain the working and characteristics of DIAC

(OR)

b.Explain the following:

(i)Silicon wafer preparation

(ii)Twin tube process