Roll No. ....

24004

B. Tech. 2nd Semester "F Scheme"
Examination - May, 2010

BASICS OF ELECTRONICS

Paper : ECE-101-F

Time : Three hours]   *[Maximum Marks : 100*

Before answering the question, candidates should ensure that they have been supplied the correct and complete question paper. No complaint in this regard, will be entertained after examination.

Note : Attempt any *five* questions.

1. (a) What is knee voltage ?   3

   (b) What is cas code amplifier ?   3

   (c) What is barkausen criteria ?   3

   (d) What is C M R R ?   3

   (e) Define datch and flip flop.   3

   (f) Advantages of L E D over L C D.   3

   (g) What is gsaticule ?   2

2. (a) Differentiate between entrinsic and intrinsic semiconductors.   6

(b) Draw and explain the V-I characteristics of a diode with the help of current of diode. 7

(c) Explain I/0 (v-I) characteristics of C E amplifiers. 7

3. (a) Draw and explain the frequency response curve of RC coupled amplier and derive expressions for upper and lower cut off frequencies. 10

(b) Explain the working of feed back networks. Why these are required ? What are their advantages ? 10

4. (a) Draw and explain the circuit and working of crystal oscillator. 10

(b) Draw and explain the circuit and working of wein bridge oscillator. 10

5. (a) Draw the basic block diagram of op-amp. 6

(b) Explain op-amp as differential amplifier. 6

(c) Explain : (i) slew rate (ii) o/p offset voltage (iii) PS RR. 8

6. Write short notes on : 20

(a) SMPS.

(b) Master slave flip flop.

(c) Johnson counter.

7. (a) Draw the basic block diagram of CRT and explain its working. 10

(b) Explain the working of function generator. 10

8. Write short notes on :   20

    (a) Seven segment display

    (b) Electronic displays.

9. Briefly describes :   20

    (a) Types of liquid crystal cells.

    (b) Multimeter.

———————