

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.

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| 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/O (v-I) characteristics of C E amplifiers. 7
3. (a) Draw and explain the frequency response curve of RC coupled amplifier 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.