PVP 14

Code: CS2T5, IT2T5

I B.Tech - II Semester – Regular Examinations – JULY 2015

BASIC ELECTRONICS ENGINEERING
(Common for CSE & IT)

Duration: 3 hours Max. Marks: 70

PART – A

Answer ***all*** the questions. All questions carry equal marks

11x 2 = 22 M

1. a) Draw the volt-Ampere characteristics of PN Junction diode.

   b) List the applications of PN Junction diode.

   c) Draw the symbol of photo diode, Zener diode and LED

   d) What is meant by thermal runaway?

   e) Define ripple factor

   f) Define early effect in transistor CB configuration.

   g) Draw the block schematic of an OP-AMP

   h) Define Comparator.

   i) How is the slew rate measured?

   j) List the non ideal dc characteristics of an OP-AMP

   k) List out the applications of OP-AMP

PART – B

Answer any ***THREE*** questions. All questions carry equal marks. 3 x 16 = 48 M

2. a) Draw the energy band diagram of a PN junction and explain the working of a diode. 8 M

b) Explain the operation of zener diode as a voltage regulator 8 M

3. a) Show that a full-wave rectifier is twice as efficient as a half-wave rectifier. 8 M

b) List out the merits and demerits of Half-wave and full-wave rectifier. 8 M

4. Draw the circuit diagram of an NPN junction transistor CE configuration and describe the static input and output characteristics. Also defines active, saturation and cutoff regions. 16 M

5. List and explain the parameters given in manufacturer's data sheet of an OP-AMP 16 M

6. Explain with neat circuit of Inverting and Non Inverting amplifier using OP-AMP. 16 M