**

**I Mid Term examination**

**Session: 2018-19**

**B. Tech II Year (III Semester)**

**Subject with code:** Electronic Devices, (3EC4-07)

**SET-B**

Time: 2 hrs. M.M.:40

**Instruction for students:**

1. No provision for supplementary answer book.
2. Question paper contains three sections. Sec A includes 5 Short answers type questions (upto 25 words) Sec B- contains 06 Questions out of which any 04 questions to be attempt by the student (Analytical/Problem solving questions.).Sec C- contains 03 Questions out of which any 02 questions to be attempt by the student (Descriptive /Design questions.)

**Sec-A(5\*2=10 Marks)**

Q.1 What is the Diffusion Current?

Q.2 What is the Use of Zener Diode

Q.3 What is the Use of Transistor?

Q.4 Write the Transistor Current equation.

Q.5 Write the Relation between Alpha and Beta

**Sec-B(4\*4=16 Marks)**

Q.1 Explain the Difference between direct and indirect band Gap Semiconductor.

Q.2 Write Short note on Sensitors and thermistores.

Q.3 What do you understand by Sheet Resistance?

Q.4 Explain the Working of the PN Junction Diode.

Q.5 What is the basic Difference between Avalanche Breakdown and Zener Breakdown?

Q.6 Find the Q- Point (Ic and Vce) of the Given Circuit.

**Sec-C(2\*7=14 Marks)**

Q.1 Derive the Poison Equation and Continuity Equation?

Q.2 Explain the working of the Transistor with the help of input and output Waveform.

Q.3 Derive the E-K Diagram for Semiconductor Material