

Seat No.: _____

Enrolment No. _____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC Sem-I June-July Examination 2011

Subject code: X 11101 Subject Name: BASIC ELECTRONICS

Date: 1/07/11

Total Marks: 70

Time: 10:30am to 1:00pm

Instructions:

1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

- Q.1** (a) Explain series clipper circuit with biasing. **07**
(b) Explain construction and characteristics of L.E.D. **07**
- Q.2** (a) Explain capacitor filter for full wave and half wave rectifier. **07**
(b) Give comparison between half wave and full wave rectifier. **07**
OR
(b) Explain construction and working of Tunnel diode. **07**
- Q.3** (a) Explain diode ideal/approximate/exact characteristics with equivalent circuit. **07**
(b) Explain the hall effect. **07**
OR
- Q.3** (a) Give comparison between germanium diode and silicon diode. **07**
(b) Explain the full-wave bridge rectifier with wave form. Derive the equation of V_{dc} and efficiency and ripple factor. **07**
- Q.4** (a) Explain different current component of NPN transistor. **07**
(b) Explain input and output characteristics of C-E configuration of transistor. Which parameters we can obtain from the graph? **07**
OR
- Q. 4** (a) What is the need of biasing in case of transistor? List the different method of biasing. **07**
(b) In which condition the operating point is changed in case of transistor C-E amplifier. **07**
- Q.5** (a) What is polarity marking for PNP transistor for cutoff, saturation and active region of transistor characteristics? **07**
(b) Explain the complementary push pull amplifier. **07**
OR
- Q.5** (a) Explain class B and Class A power amplifier from the characteristics. **07**
(b) Give comparison between BJT and FET. **07**
