

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER • 2014****Subject Code: 151703****Date: 17-06-2014****Subject Name: Electronics in Industries****Time: 10.30 am - 01.00 pm****Total Marks: 70****Instructions:**

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

- Q.1 (a)** Prepare an application of fast recovery diode. Draw the circuit diagram and explain. **07**
- (b)** Prepare an application of Schottky diode. Draw the circuit diagram and explain. **07**
- Q.2 (a)** Draw and compare the characteristics of general purpose diode and MOS diode. **07**
- (b)** Draw any application of MOSFET. Can a BJT replace the MOSFET? Why? **07**
- OR**
- (b)** Explain the construction and characteristic of LASCR. **07**
- Q.3 (a)** Explain the application of GTO. **07**
- (b)** Differentiate SCS and MCT in detail. **07**
- OR**
- Q.3 (a)** Draw and explain construction, working and characteristics of BENISTOR **07**
- (b)** Which of the turn on method you will use for your application? (Use any application of your choice) Why? **07**
- Q.4 (a)** Draw and explain the UJT characteristics. Which portion of it is used for SCR turn on off? **07**
- (b)** Prepare application of SBS. Explain its working. **07**
- OR**
- Q.4 (a)** Which type of the commutation circuit is better? Explain why? **07**
- (b)** What is the need of gate protection? Explain. Draw the circuit required for it. **07**
- Q.5 (a)** Prepare half wave rectifier with R-L load. Explain its working. **07**
- (b)** Prepare half wave controlled rectifier with R-L load. Explain its working. **07**
- OR**
- Q.5 (a)** Prepare six phase half wave controlled rectifier. Explain its working. **07**
- (b)** Prepare three phase fully controlled bridge rectifier. Explain its working. **07**
