

Seat No.: \_\_\_\_\_

Enrolment No. \_\_\_\_\_

# GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-V (OLD) - EXAMINATION – SUMMER 2017

Subject Code: 151703

Date: 27/04/2017

Subject Name: Electronics in Industries

Time: 02:30 PM to 05:00 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) Discuss construction of Schottky Diode and explain its application with the circuit diagram. **07**  
(b) Discuss construction of HEXFET and explain its application with the circuit diagram. **07**
- Q.2** (a) What is a LASCR? Discuss its application with the circuit diagram. **07**  
(b) Explain characteristics of Gate Turn-off Thyristor with diagram. **07**
- OR**
- (b) What is a MCT? Explain construction and characteristics of MCT. **07**
- Q.3** (a) Power Semiconductor Devices needs to be protected for various parameters, list out the parameters and explain any one protection in detail. **07**  
(b) Draw and explain Half-Wave Controlled Rectifier with Resistive Load with circuit diagram. **07**
- OR**
- Q.3** (a) Draw and explain Three-Phase Fully-Controlled Bridge Rectifier. **07**  
(b) Discuss Three-Phase Half-Wave Controlled Rectifier with necessary diagram. **07**
- Q.4** (a) Explain Three-Phase Centre-Tapped Full-Wave rectifier. **07**  
(b) Discuss Three-Phase Bridge Rectifier in detail. **07**
- OR**
- Q.4** (a) Explain Centre-Tapped Full-Wave Rectifier with circuit diagram. **07**  
(b) Discuss Half-Wave Rectifier with Resistive Load in detail. **07**
- Q.5** (a) Explain construction and working of Silicon Unilateral Switch. **07**  
(b) Prepare any one application of Unijunction Transistor and explain. **07**
- OR**
- Q.5** (a) Discuss dv/dt Turn-on of a Thyristor. **07**  
(b) Draw and explain characteristic of a TRIAC. **07**

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