

GUJARAT TECHNOLOGICAL UNIVERSITY**BE - SEMESTER-V • EXAMINATION – SUMMER • 2015****Subject code: 151703****Date: 07/05/2015****Subject Name: Electronics in Industries****Time: 02.30pm-05.00pm****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) What is Schottky diode? Explain its functioning, characteristics and compare it with p-n junction diode. **07**

(b) Discuss depletion type power MOSFET in detail. **07**

Q.2 (a) Discuss gate turn off thyristor in detail. **07**

(b) What is IGBT? Draw its symbol and construction. "IGBT is advantageous than BJTS and MOSFET" prove. **07**

OR

(b) Explain RCT in detail. **07**

Q.3 (a) List out and explain thyristor turn on methods. **07**

(b) Discuss UJT in detail. **07**

OR

Q.3 (a) How can we design UJT firing circuit? Explain in detail. **07**

(b) Discuss SBS and SUS. **07**

Q.4 (a) Discuss single phase half wave rectifier in detail. **07**

(b) Derive the formulas of efficiency, TUF and PIV of single phase half wave rectifier. **07**

OR

Q.4 (a) Explain single phase full wave bridge rectifier in detail. **07**

(b) Discuss single phase full wave bridge rectifier with resistive inductive load in detail. **07**

Q.5 (a) Discuss half wave controlled rectifier with resistive load in detail. **07**

(b) Discuss half wave controlled rectifier with resistive inductive load in detail. **07**

OR

Q.5 (a) Explain six phase half wave controlled rectifier in detail. **07**

(b) Explain six phase full wave controlled bridge rectifier in detail. **07**
