Seat No.:	Enrolment No
Seat No	Elifolillent No

Subject Code:X71102

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER-VII EXAMINATION - SUMMER 2016

Date:12/05/2016

•	e:02 uction 1.	Attempt all questions.)
	2. 3.	Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Characteristic.	07
	(b)	Explain the operation of series connected thyristors in detail.	07
Q.2	(a) (b)		07 07
	(b)		07
Q.3	(a)	Derive the expressions for the average load voltage, load current, RMS Load voltage of a single phase half wave controlled rectifier with restive load.	07
	(b)	Draw the structure & the principle operation of Power MOSFET. OR	07
Q.3	(a)		07
	(b)	Explain in brief the following devices 1) IGBT 2) GTO	07
Q.4	(a) (b)	List & explain the performance parameters of an inverter. Explain the principle operation of step down and step up choppers. OR	07 07
Q.4	(a) (b)	Classify the chopper. List all types of chopper and explain any two in brief. List the heating mechanism available and explain any one in detail.	07 07
Q.5	(a) (b)	Explain the natural commutation & forced commutation of SCR. Explain the different types of UPS. And give the comparison between online and offline UPS.	07 07
Q.5	(a) (b)	OR Draw and explain full bridge invertors. Also give comparison of Half Bridge & Full Bridge Inverter. Describe SMPS with necessary diagrams in detail.	07 07
