Seat No.:	Enrolment No.

Subject Code: 182401

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VIII • EXAMINATION - SUMMER 2014

Date: 05-06-2014

Subje	ect I	Name: Power Electronics Application in Power System	
Time	: 10	0:30 am TO 01:00 pm Total Marks: 70)
Instru			
	1. 2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a)	Define the following terms: 1. FACTS 2. SVC 3.BESS 4 .SSG 5.TCBR 6.TSR 7. UPFC	07
	(b)	List the constraint equation and control variable for 1. SVC 2.TCSC 3.STATCOM 4.SSSC 5. SPST 6.UPFC 7.IPFC	07
Q.2	(a)	 Enlist the classification of FACTS Controller. List the benefits with application of FACTS Controller. Explain applications of FACTS controller in distribution system. 	02 03 02
	(b)	•	07
	(b)	List comparative between HVDC and FACTS in perspective with: 1. Underground Transmission 2. Connecting ac system of different or incompatible frequency.	07
Q.3	(a)	Explain the basic operating principle, characteristics and applications of STATCOM.	07
	(b)	OR	07
Q.3	(a) (b)		07 07
Q.4	(a) (b)	•	07 07
Q.4	(a)	Define DPF. List and Explain the generation and effect of current harmonics in power system.	07
Q.4	(b)		07
Q.5	(a) (b)	•	07 07
Q.5	(a) (b)	Write technical note on: EMI-EMC	07 07
