Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER–V • EXAMINATION – SUMMER • 2014

Subject Code: X 50903 **Date: 31-05-2014**

Subject Name: Power Electronics-II

Time: 02:30 pm - 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)**	Write a short note on voltage source inverter.	**07**
	(b)	Write a short note on series inverter with necessary waveforms.	**07**
Q.2	**(a)**	Write a short note on 3-phase bridge inverter with suitable diagrams.	**07**
	(b)	Explain PWM techniques with suitable examples.	**07**
		OR	
	(b)	Write a short note on PWM half bridge inverter	**07**
Q.3	**(a)**	Write a short note on single phase full wave voltage controller with R-L load.	**07**
	(b)	Write a short note on 3-phase full wave voltage controller with R load.	**07**
		OR	
Q.3	**(a)**	Write a short note on basic principle of 1-phase cycloconverter.	**07**
	(b)	Describe load commutated cycloconverter.	**07**
Q.4	**(a)**	Write a short note on v/f control method for induction motor drives.	**07**
	(b)	Describe slip power recovery method for induction motor.	**07**
		OR	
Q.4	**(a)**	Write a short note on variable speed drives for synchronous motor.	**07**
	(b)	How to control speed of synchronous motor drive using cycloconverter.	**07**
Q.5	**(a)**	Write a short note on induction heating.	**07**
	(b)	Write a short note on working of electronic lamp ballast.	**07**
		OR	
Q.5	**(a)**	Write a short note on static VAR compensators.	**07**
	(b)	Write a short note on DC static switch.	**07**

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