Seat No.: Enrolment No				
		GUJARAT TECHNOLOGICAL UNIVERSITY		
BE- V <sup>th</sup> SEMESTER-EXAMINATION – MAY/JUNE - 2012				
Subject code: 152405 Date: 07/			06/2012	
•		lame: Power Electronics Applications		
Time: 02:30 pm – 05:00 pm Total M Instructions:			arks: 70	
2.	Mal	empt all questions. ke suitable assumptions wherever necessary. ares to the right indicate full marks.		
Q.1	(a)	Draw & explain Basic Building Block of Power Electronics System.	07	
	<b>(b)</b>	Write a short note on UPS – Uninterruptable Power Supply.	07	
Q.2	(a)	Draw & Explain V-I Characteristic of Power MOSFET.	07	
	<b>(b)</b>	Explain fly-back converter with necessary diagrams.	07	
	<b>(b)</b>	OR	07	
	<b>(b)</b>	Explain forward converter with necessary diagrams.	07	
Q.3	(a)	Explain two-transistor analogy of a thyristor with necessary diagrams.	07	
	<b>(b)</b>	State different types of heating process. Explain Induction Heating in Brief.	07	
		OR		
<b>Q.3</b>	(a)	Define 1) Holding Current	07	
		2) Latching Current		
	<b>(b)</b>	Enlist different application of Di-electric Heating.	07	
Q.4	(a)	Draw single phase full converter DC Motor drive with necessary	07	
		waveforms.		
	<b>(b)</b>	Write a short note – HVDC Transmission.  OR	07	
Q.4	(a)	Explain single phase induction motor drive.	07	
<b>4.</b>	(b)	Enlist different Non-Conventional energy sources utilized in power	07	

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(a) Draw & explain single phase Bridge converter with R-L Load with  $\alpha = 07$ 

electronics. Discuss any one in brief.

(b) Discuss Electronic Fan Regulator with suitable diagrams.

(a) Draw & explain Full bridge inverter with R-L load.

(b) Discuss in brief: DC Electric Traction System.

Q.5

Q.5

**07** 

**07** 

**07**