Seat No.:	Enrolment No.

## GUJARAT TECHNOLOGICAL UNIVERSITY

Sı	BE - SEMESTER-V (OLD) - EXAMINATION – SUMMER 2017 Subject Code: 152403 Date: 01/05/2017 Subject Name: Applied Power Electronics			
Time: 02:30 PM to 05:00 PM Total Marks: Instructions:		<b>70</b>		
111,	1. 2.	Attempt all questions.  Make suitable assumptions wherever necessary.  Figures to the right indicate full marks.		
Q.1	(a)	Define Electrical Motor Drive. Explain the difference between AC and DC	07	
	<b>(b)</b>	drives.  Discuss concept of power processing with neat block diagram.	07	
Q.2	(a) (b)	Write Technical Note on: PWM Technique. Write a short note on battery charging methods.  OR	07 07	
(	<b>(b)</b>	Define signal processing. Explain the necessity and type of signal processing and its requirement in PES.	07	
Q.3	(a)	Define Active Filter. Explain concept and realization of Band Stop Filter using simple circuit.	07	
	<b>(b)</b>	Define Rectifier. Explain basic power diagram, working, advantage, disadvantage and application of it.	07	
Q.3	(a)	OR Explain the concept of HVDC transmission with neat diagram.	07	
Ų.S	(a) (b)			
Q.4	(a)	Explain basic power diagram, working, advantages, disadvantages and application of Cyclo-converter.	07	
	<b>(b)</b>	Explain interconnection of renewable energy sources and energy storage system to the utility grid.	07	
0.4	(a)	OR	07	
Q.4	(a)	Explain basic power diagram, working, advantages, disadvantages and application of Inverter.	07	
	<b>(b)</b>	Explain digital to analog converter with suitable example.	07	
Q.5	(a) (b)	Explain working of un-interrupted power supply (UPS) with block diagram.  Write a brief note on high frequency fluorescent lighting.  OR		
Q.5	(a) (b)	Write a brief note on static VAR compensation. Write Technical Short Note on: Ultrasonic	07 07	
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