Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–VIII EXAMINATION – WINTER 2015

Subject Code:180304 **Date:12/12/2015**

Subject Name: Electronic System Design

Time: 2:30pm to 5:00pm **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)**	Explain forward & reverse characteristics of Thyristor with neat diagram.	**07**
	(b)	Enlist & explain different turn on methods of Thyristor.	**07**
Q.2	**(a)**	Draw symbols & VI characteristics of DIAC, TRIAC, LASCR, n-channel MOSFET.	**07**
	(b)	Write a short note on IGBT.	**07**
		OR	
	(b)	What is commutation? Explain class D commutation technique.	**07**
Q.3	**(a)**	Explain principle & working of Stepper motor.	**07**
	(b)	Explain the principle of Electromechanical energy conservation.	**07**
		OR	
Q.3	**(a)**	Explain construction & working of Servo motor.	**07**
	(b)	Give the difference between Electromagnetic and Solid state relay.	**07**
Q.4	**(a)**	Write a short note on Power diodes.	**07**
	(b)	Explain Series & Parallel Resonant Inverter.	**07**
		OR	
Q.4	**(a)**	Explain different performance parameters of Rectifier.	**07**
	(b)	Explain Principal of Operation of Pulse Width Modulated Inverters.	**07**
Q.5	**(a)**	Give the principle of Step up and Step down converter.	**07**
	(b)	Explain Electromagnetic compatibility & Electromagnetic Interference in analog circuit.	**07**
		OR	
Q.5	**(a)**	Write a short note on Buck-Boost Regulators.	**07**
	(b)	Briefly explain Grounding & Shielding in analog circuit.	**07**

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