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GUJARAT TECHNOLOGICAL UNIVERSITY
BE - SEMESTER–VII (OLD) EXAMINATION – WINTER 2018

Subject Code: 172402   **Date: 19/11/2018**

Subject Name: Industrial Drives And Control - II

Time: 10:30 AM TO 01:00 PM   **Total Marks: 70**

Instructions:
1. Attempt all questions.
2. Make suitable assumptions wherever necessary.
3. Figures to the right indicate full marks.

			MARKS
Q.1	(a)	Discuss advantages of stator voltage control method for Constant load –torque & variable load –torque.	07
	(b)	Explain the Modeling of induction machine in detail.	07
Q.2	(a)	Describe the analysis of Induction Motor with Unbalanced rotor impedances.	07
	(b)	Enlist the Application of AC Drives & explain any one in details.	07
		OR	
	(b)	Enlist speed control methods for synchronous motor. Discuss adjustable frequency operation in brief.	07
Q.3	(a)	Describe the analysis of Induction Motor with Non-sinusoidal voltage supply.	07
	(b)	Explain the concept of in-direct vector control of Induction Motor Drive.	07
		OR	
Q.3	(a)	Explain the Rotor resistance control for induction motor.	07
	(b)	Explain the Transient analysis of Drives.	07
Q.4	(a)	Explain the torque slip characteristics for induction motor.	07
	(b)	Explain the Principle of V/F control.	07
		OR	
Q.4	(a)	Explain the basic principle of DTFC for Voltage fed PWM inverter drives.	07
	(b)	Discuss on Permanent Magnet AC Motor Drive.	07
Q.5	(a)	Discuss reference frame theory for induction motor in brief.	07
	(b)	Explain CSI control for IM.	07
		OR	
Q.5	(a)	Explain block diagram of feed-forward vector control for IM.	07
	(b)	Explain the super synchronous speed operation for induction motor.	07

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