GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER-VII • EXAMINATION - WINTER 2013

U			ate: 05-12-201	-12-2013	
Subject Name: Industrial Drives and Control-II Time: 10:30 TO 01:00 Instructions: Total Marks:				0	
11150	1. 2. 3.	Attempt all questions.			
Q.1	(a)	Draw and explain characteristics of three phase induction motor region of operation.	. Indicate stable	07	
	(b)	Discuss plugging applied to induction motor.		07	
Q.2	(a)	Write a brief note on closed loop operation of induction motor with stator voltage control.		07	
	(b)	A 400 V, 4 pole, 50 h.p., and 3-phase 50 Hz squirrel cage induct slip of 5% on full load torque. The ratio of its rotor stand stiphase to rotor resistance per phase is 3:1. Calculate the value of in N-m at full load.	ll reactance per	07	
		OR			
	(b)	Write a brief note on parameter sensitivity of vector controlled in	nduction motor.	07	
Q.3	(a) (b)	Explain V/F control of induction motor with its merits and deme Discuss the operation of induction motor operated with non-sin source.		07 07	
		OR			
Q.3	(a)	Discuss the speed control of induction motor with super synoperation.	chronous speed	07	
	(b)	Explain starting of induction motor with star-delta starter.		07	
Q.4	(a) (b)	Discuss indirect rotor flux oriented vector control scheme for inc Explain pulse width modulated inverter drives. Draw appropriate OR	dth modulated inverter drives. Draw appropriate waveforms.		
Q.4	(a) (b)			07 07	
Q.5	(a) (b)	Explain the concept of sensor less control of induction motor. Discuss the closed loop rotor resistance control method for significant motor.	•		
Q.5	(a) (b)			07 07	
