Seat	No.:	Enrolment No.	
		GUJARAT TECHNOLOGICAL UNIVERSITY PDDC - SEMESTER-VIII • EXAMINATION – SUMMER 2013	
Subject Code: X80903		Code: X80903 Date: 17-05-2013	
Tin	ne: 10 ruction 1.	Attempt all questions.	
		Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	What do you mean by drive? Explain multi quadrant operation of electric drive Explain different types of load characteristic. Compare load characteristic with Motor characteristic for stable operation.	07 07
Q.2	(a)	Explain different types of electrical characteristic of A.C. and D.C. motor.	07
	(b)	Compare use of A.C. drives with D.C. drives. Explain different speed control method of Induction motor. OR	07
	(b)	Explain group drive, individual drive and multi motor drive.	07
Q.3	(a) (b)	Write short notes on different class of duties of electrical motor. How can we decide motor rating from load cycle. OR	07 07
Q.3	(a) (b)	Explain factors to be affected for selection of electric drive. Explain electrical braking	07 07
Q.4	(a) (b)	Draw and explain speed-time curve of different traction services Which types of speed-torque characteristic required for suburban service and main line service.	07 07
Q.4	(a)	OR What is specific energy consumption? Derive equation for specific energy	07
	(a)	What is specific energy consumption? Derive equation for specific energy consumption.	U/
	(b)	Compare the following systems of tract electrification with reference to operating voltage economy in operation and suitability to the topography of the region where they are best suited. (1) D.C. system (2) 1-phase A.C. system.	07

OR

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(a) Short notes on linear induction motor use for traction. Q.5 (b) Explain what are the different overhead equipments used for traction system

Q.5 (a) Explain series-parallel starting of d.c. series traction motors.

(b) Explain trams and trolley bus.
