Seat No.:	Enrolment No.
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GUJARAT TECHNOLOGICAL UNIVERSITY

		M. E SEMESTER – III • EXAMINATION – WINTER • 2013	
	•	code: 734502 Date: 28-11-2013 Name: EMC in Power Electronics	
Ti	me: 1 struc	10:30 am – 13:00 pm Total Marks: 70 etions: Attempt all questions.	
	2. 3.		
Q.1	(a)	Explain basic terms and conducted EMI references with reference to EMI measurement.	07
	(b	Discuss the sources of EMI generation in detail.	07
Q.2	(a) (b	Explain Spectrum Analyzers in detail. Explain the classification of disturbances by frequency.	07 07
		OR	
	(b	Explain the classification of disturbances by transmission mode.	07
Q.3	(a) (b	Explain the noise suppression in relay systems. Explain the EMI measurements for consumer appliances. OR	07 07
Q.3	(a) (b	Explain the method for measuring Interference current. Explain the application of RC- Snubbers to power semiconductors.	07 07
Q.4	(a) (b	Explain the method for the calculation of Worst-Case Insertion loss. Explain the design method for mismatched impedance condition. OR	07 07
Q.4	(a) (b	Briefly explain the reduction techniques for internal EMI. Explain the design method for EMI filter with Common-mode choke coil.	07 07
Q.5	(a)	Briefly explain the EMC tests as per IEC specifications.	07

(a) Explain the method for calculating energy content of transient disturbances.

OR

(b Explain conductive noise and electromagnetic coupling.

Briefly explain the surge protection devices.

Q.5

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