Seat No.:	Enrolment No
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GUJARAT TECHNOLOGICAL UNIVERSITY

		ME – SEMESTER III (OLD) – • EXAMINATION – SUMMER 2016	
Subj	Subject Code: 734502 Date:05/05/20		
Subj	ect I	Name: EMC in Power Electronics	
	e:10:	:30 am to 01:00 pm Total Marks: 70	0
	2.	Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain Spectrum Analyzers in detail. Explain the EMI Measurement techniques for consumer appliances.	07 07
Q.2	(a) (b)	Describe Electromagnetic Disturbances by Transmission mode. Discuss the sources of EMI generation in detail. OR	07 07
	(b)	What are the effects of extreme condition of mismatched impedance on EMI filter?	07
Q.3	(a)	Draw equivalent circuit for determining the capacitive current of noise suppression and explain it with necessary equation	07
	(b)	Explain feed through capacitor and feed through filter. OR	07
Q.3	(a)	Draw and explain basic circuit configuration of EMI filter circuit configurations.	07
	(b)	Draw and explain equivalent circuits of common mode choke coils.	07
Q.4	(a) (b)	Explain high frequency disturbance test. Describe worst-case insertion loss test method with necessary equations. OR	07 07
Q.4	(a) (b)	Briefly explain the EMC tests as per IEC specifications. Explain HF characteristics of noise filter circuit elements	
Q.5	(a) (b)	Explain the method for calculating energy content of transient disturbances. Briefly explain the surge protection devices.	07 07
Q.5	(a) (b)	OR Discuss inductive noise coupling mode of electromagnetic coupling. Explain the difference between conductive noise coupling and electromagnetic coupling. O' Coupling.	
