Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

ME – SEMESTER III (OLD) – • EXAMINATION – SUMMER 2017

	•	t Code: 734502 Date: 04/05/20	17
Ti	me:0 tructio 1. 2.	Attempt all questions.	70
Q.1	(a) (b)	Explain the classification of disturbances by transmission mode. Explain basic terms and conducted EMI references with reference to EMI measurement.	07 07
Q.2	(a) (b)	Explain the classification of disturbances by character. Explain EMI measurements for consumer appliances. OR	07 07
	(b)	Explain measuring HF characteristics of EMI filter elements.	07
Q.3	(a) (b)	Explain the application of RC- Snubbers to power semiconductors. Explain EMI from controlled rectifier circuits. OR	07 07
Q.3	(a) (b)	Describe shielded transformers with necessary equivalent circuit. Describe worst-case insertion loss test method with necessary equations.	07 07
Q.4	(a) (b)	Draw and explain equivalent circuits of common mode choke coils. Explain Laplace transform root calculation method. OR	07 07
Q.4	(a) (b)	Explain design method for mismatched impedance condition. Explain the capacitive current for noise suppression with necessary equations.	07 07
Q.5	(a) (b)	Briefly explain the surge protection devices. What are the different classes of EMS test as per IEC specifications?	07 07
Q.5	(a) (b)	Explain filter design method for voltage attenuation. Explain the difference between conductive noise coupling and electromagnetic coupling.	07 07
