GUJARAT TECHNOLOGICAL UNIVERSITY BE - SEMESTER-VI • EXAMINATION – WINTER 2013

Su Su	bject bject	Code: 160905Date: 04-12-2013Name: Electrical and Electronic Measurement	
Tit Inst	ne: 0 tructio 1. 2. 3.	2:30 pm to 05:00 pm Total Marks: 70 ons: Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Describe sources and null detector used in A.C. bridge. Explain Campbell's bridge.	07 07
Q.2	(a) (b)	Describe working of low voltage Schering bridge. Derive equation of capacitance and dissipation factor. Explain Anderson's bridge with vector diagram.	07 07
		OR	
	(b)	Describe method of measurement of earth resistance with neat sketch.	07
Q.3	(a)	Usages of Wein's Bridge and derive the expression of frequency in terms of its parameters.	07
	(b)	Derive equation for ratio and phase angle error of a potential transformer.	07
Q.3	(a) (b)	Which methods are used for measurement of low resistance, Explain any one. State the methods for measurement of high resistance and Explain the construction and working of meggar.	07 07
Q.4	(a) (b)	Discuss principle and working of digital LCR meter. Explain the construction and operation of flux meter.	07 07
Q.4	(a) (b)	Explain construction and working of current transformer. Explain Murray loop test for location cable fault.	07 07
Q.5	(a) (b)	Explain Heterodyne wave analyzer with necessary block diagram. Describe the method for determination of B-H curve of magnetic material.	07 07
0.5	(-)	OR Describe the verley lean test for leasting of ground and short	07
Q.5	(a)	circuit fault in cables.	07
	(b)	Explain frequency selective wave analyzer with block diagram.	07
