Seat No.: _____ *Enrolment No._____*

GUJARAT TECHNOLOGICAL UNIVERSITY

BE- VIth SEMESTER–EXAMINATION – MAY- 2012

Subject code: 160905 **Date: 19/05/2012**

Subject Name: Electrical and Electronic Measurement

Time: 10:30 am – 01:00 pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**

Q.1	**(a)**	Give classification of errors in detail and explain their remedies in brief.	**07**
	(b)	Explain following term 1 Accuracy 2. Precision. 3 Sensitivity 4 Resolution	**07**
Q.2	**(a)**	Explain Maxwell's inductance capacitance bridge with connection diagram and phasor diagram also state balance condition for the same	**07**
	(b)	Describe sources and null detector used in a.c. bridge	**07**
		OR	
	(b)	Describe working of low voltage Schering bridge. Derive equation of capacitance and dissipation factor	**07**
Q.3	**(a)**	Explain Wheastone Bridge method for measurement of resistance	**07**
	(b)	Describe Kelvin's double Bridge with neat diagram	**07**
		OR	
Q.3	**(a)**	Discuss difficulties observed in measurement of high resistance	**07**
	(b)	Describe method of measurement of earth resistance with neat sketch	**07**
Q.4	**(a)**	Explain method for measurement of flux density	**07**
	(b)	Discuss principle and working of digital LCR meter	**07**
		OR	
Q.4	**(a)**	Explain constriction of current transformer	**07**
	(b)	Discuss effect of change in burden and power factor on the ratio and phase angle of CTs	**07**
Q.5	**(a)**	Short note on determination of B-H curve	**07**
	(b)	Explain Murray loop test for location cable fault	**07**
		OR	
Q.5	**(a)**	Explain harmonic distortion analyzer	**07**
	(b)	Describe application of instrumentation amplifier	**07**

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