Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC - SEMESTER– II EXAMINATION – SUMMER 2015

Subject Code:X20902 **Date: 03/06/2015**

Subject Name: Electrical and Electronic Measurement I&II

Time: 10.30am-01.00pm **Total Marks: 70**

Instructions:

1. **Attempt all questions.**
2. **Make suitable assumptions wherever necessary.**
3. **Figures to the right indicate full marks.**
4.

Q.1	**(a)**	Define the following terms (1) True value (2) Precision (3) Error (4) Sensitivity (5) Resolution (6) Accuracy (7) Threshold	**07**
	(b)	Define the term self inductance , Explain Maxwell's bridge for measurement of self inductance with vector diagram	**07**
Q.2	**(a)**	Explain construction and working of attraction type moving iron instrument.	**07**
	(b)	Describe Kelvin's double Bridge with neat diagram	**07**
		OR	
	(b)	Explain construction and working of a basic electronic voltmeter.	**07**
Q.3	**(a)**	Construction and working of a Single phase energy meter.	**07**
	(b)	. Explain construction and working of magger.	**07**
		OR	
Q.3	**(a)**	Explain working of digital LCR meter.	**07**
	(b)	Explain Schering Bridge with diagram.	**07**
Q.4	**(a)**	Explain difference between Gravity control and Spring control.	**07**
	(b)	With neat sketch explain the two-wattmeter method of power measurement	**07**
		OR	
Q.4	**(a)**	Construction and working of resonance type frequency meter	**07**
	(b)	Explain construction and working of a DC potentiometer.	**07**
Q.5	**(a)**	Explain following terms in case of single phase energy meter (1) creep (2) friction compensation (3) over load compensation	**07**
	(b)	Construction and working of D'Arsonval galvanometer.	**07**
		OR	
Q.5	**(a)**	Why instrument transformer is required? justify the statement "Never open secondary winding circuit of a current transformer while its primary winding is energized ''	**07**
	(b)	Describe Whetstone Bridge with neat diagram	**07**

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