Seat No.: _____ **Enrolment No._____**

GUJARAT TECHNOLOGICAL UNIVERSITY

PDDC- SEMESTER–II - EXAMINATION – SUMMER 2017

Subject Code: X20902 **Date:01/06/2017**

Subject Name: ELECTRICAL MEASUREMENT I & II

Time: 10:30 AM to 01:00 PM **Total Marks: 70**

Instructions:

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

Q.1	**(a)**	Define the terms: (1) Sensitivity (2) Resolution (3) Accuracy (4) Precision (5) Error (6) Calibration (7) Dead zone	**07**
	(b)	Explain the construction and working of a single phase energy meter.	**07**
Q.2	**(a)**	Explain the construction and working of attraction type moving iron instrument.	**07**
	(b)	Explain the construction and working of megger. Write its applications.	**07**
Q.3	**(a)**	Explain two wattmeter method of three phase power measurement with neat sketch.	**07**
	(b)	Explain Wheatstone bridge for measurement of low resistance.	**07**
Q.4	**(a)**	Discuss with neat diagram the DC potentiometer-Crompton Potentiometer with its calibration and test procedure.	**07**
	(b)	Discuss the different methods of damping in indicating instruments.	**07**
Q.5	**(a)**	Explain the construction and working of PMMC type voltmeter.	**07**
	(b)	State the different methods of measuring medium resistances. Explain any one method in detail	**07**
Q.6	**(a)**	Explain measurement of Capacitance by any A.C. bridge.	**07**
	(b)	Explain Maxwell's bridge for measurement of self inductance.	**07**
Q.7	**(a)**	Explain various effects with which deflecting torque is produced?	**07**
	(b)	Draw the equivalent circuit and phasor diagram of a current transformer. Derive the expression for ratio and phase angle errors.	**07**

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