## **GUJARAT TECHNOLOGICAL UNIVERSITY** PDDC - SEMESTER-II • EXAMINATION – SUMMER 2013

Subject Code: X20902Date: 10-06-2013Subject Name: Electrical Measurement I & IITime: 02.30 pm - 05.00 pmTotal Marks: 70InstructionerTotal Marks: 70			
Instr	1. 2. 3.	Attempt all questions. Attempt all questions. Make suitable assumptions wherever necessary. Figures to the right indicate full marks.	
Q.1	(a) (b)	Explain construction and working of Maxwell bridge. Construction and working of D'Arsonval galvanometer.	07 07
Q.2	(a)	Define: 1. True value, 2. Precision, 3. Error, 4. Sensitivity, 5. Resolution, 6. Accuracy. 7. Threshold	07
	<b>(b</b> )	Construction and working of resonance type frequency meter OR	07
	<b>(b</b> )	Explain Drysdale-Tinsley polar type AC potentiometer.	07
Q.3	(a) (b)	Explain construction and working of Anderson bridge. Explain construction and working of a DC potentiometer	07 07
Q.3	(a) (b)	Discuss the loss of charge method for high resistance measurement. Discuss with neat diagram the DC potentiometer - Crompton Potentiometer with its Calibration & test procedure	07 07
Q.4	(a) (b)	Explain working of digital LCR meter. With phase diagram explain the working principle of current transformer. State its applications.	07 07
Q.4	(a) (b)	<b>OR</b> With neat sketch explain the two-wattmeter method of power measurement Explain Kelvin's double bridge with a circuit diagram.	07 07
Q.5	(a) (b)	Construction and working of a Single phase energy meter. Derive expression for unknown capacitance by Schering bridge method. <b>OR</b>	07 07
Q.5	(a) (b)	Explain Weston frequency meter. Derive Torque equation of a Moving Iron instrument.	07 07

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