Seat No.: _____ Enrolment No._____

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–V • EXAMINATION – WINTER • 2014

Subject Code: 152402 **Date: 28-11-2014**

Subject Name: Electrical Measurement & Electronics Instrument

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)**	Explain about static and dynamic charact. Of instruments.	**07**
	(b)	Explain about the classification of instruments.	**07**
Q.2	**(a)**	Explain about measurement and measurement system.	**07**
	(b)	Explain about measurement standards.	**07**
		OR	
	(b)	Derive dimensions for charge, currents and E.M.F. using permittivity as forth fundamental dimention.	**07**
Q.3	**(a)**	Explain about DC-voltmeter.	**07**
	(b)	Explain about electro-dynamic instruments.	**07**
		OR	
Q.3	**(a)**	Give comparison of P.M.M.C. and M.I. Instruments.	**07**
	(b)	Explain Q-Factor of inductor. Also, explain about D-factor of capacitor.	**07**
Q.4	**(a)**	Explain about digital voltmeter.	**07**
	(b)	Explain about digital multimeter.	**07**
		OR	
Q.4	**(a)**	Explain about 1-PHASE Energy meter.	**07**
	(b)	Explain the method of medium resistance measurement.	**07**
Q.5	**(a)**	Explain any one method of capacitance measurement using bridge ckt.	**07**
	(b)	Explain any one method of inductance measurement using bridge ckt.	**07**
		OR	
Q.5	**(a)**	Explain about A/D conversion principle.	**07**
	(b)	Explain about power measurements in 3-PHASE systems.	**07**

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