Seat No.: _____ Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

BE - SEMESTER–III (OLD) EXAMINATION – WINTER 2018

Subject Code:130903 Date:10/12/2018

Subject Name:Electrical And Electronics Measuring Instruments

Time:10:30 AM TO 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)**	Define the terms.1.Accuracy 2.Precision 3.Sensitivity 4.Resolution	**07**
	(b)	Discuss Extension of range of instruments.	**07**
Q.2	**(a)**	Explain construction working of D'Arsnaval galvanometer. Also derive its torque equation	**07**
	(b)	Explain voltage standards.	**07**
		OR	
	(b)	Discuss the classification of analog instruments.	**07**
Q.3	**(a)**	With a neat diagram explain 1).construction 2).working, 3).torque equation and 4). Advantages and disadvantages of a PMMC instruments.	**07**
	(b)	Compare moving coil and moving iron instruments.	**07**
		OR	
Q.3	**(a)**	Explain the construction of multi range ammeter.	**07**
	(b)	Explain construction and working principle of thermocouple instruments.	**07**
Q.4	**(a)**	Explain the construction and working principle of single phase induction type energy meter.	**07**
	(b)	Explain the two watt-meter method for 3-phase power measurement for balanced load.	**07**
		OR	
Q.4	**(a)**	Explain the need of measuring phase sequence and also explain types of phase sequence indicator.	**07**
	(b)	Discuss applications of DC potentiometer.	**07**
Q.5	**(a)**	Write a short note on digital tachometer	**07**
	(b)	Explain with a neat diagram working of a Synchroscope	**07**
		OR	
Q.5	**(a)**	Explain the circuit diagram and operation of an Electronic Voltmeter using a differential amplifier	**07**
	(b)	Explain the principle of operation of a power factor meter.	**07**

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