Seat No.:	Enrolment No.

GUJARAT TECHNOLOGICAL UNIVERSITY

Diploma Engineering - SEMESTER-II • EXAMINATION – WINTER 2013

Subject Name: Instrumentation Device Materials		t Name: Instrumentation Device Materials	
	structi 1. A 2. N	ttempt any five questions. Iake suitable assumptions wherever necessary.	
		igures to the right indicate full marks. ach question carry equal marks (14 marks)	
Q.1	(a) (b)	List the properties of conducting materials. State the color code for Resistor and calculate value of resistor having Red, Yellow, Orange, Brown as 1 st to 4 th ring in order.	07 07
Q.2	(a) (b)	Compare Di magnetic with Paramagnetic properties of material. Classify the relays and list them	07 07
	(b)	OR Describe any one magnetic property from following: 1-Hysterisis, 2-Magnetostriction	07
Q.3	(a) (b)	List the materials of B,E,J,K,N,R,S type thermocouples List the materials used in Resistive Temperature Detector and state the properties of any one. OR	07 07
Q.3	(a) (b)	List the properties of materials used in a Thermistor and describe Negative Temp. Coefficient in brief List the color codes for the extension leads of different types of thermocouples	07 07
Q.4	(a) (b)	Name the materials used in any two of following primary components: 1-Bourdon tube, 2- Diaphragm, 3- Control Valve. List the materials used in any two of following primary components: 1-Bellows, 2-Orifice plate, 3- Pitot Tube.	07 07
Q. 4	(a) (b)	OR Compare the properties of Cesium with Sodium materials used in Photo emissive cell. List the materials used in any two of following primary components: 1- Flow nozzles, 2-Ventury, 3- Pitot Tube.	07 07
Q.5	(a) (b)	Listing the materials used in LED describe in brief their properties. Compare the properties of Indium Gallium Arsenide with Lead Selenide used in Photo diode.	07 07
Q.5	(a) (b)	OR State the types of Photo voltaic cell and state the relevant properties of Silicon. Compare the properties of Cadmium Sulphide with Lead Sulphide used in Photo conductive cell.	07 07
