GUJARAT TECHNOLOGICAL UNIVERSITY ME - SEMESTER- II EXAMINATION - SUMMER 2015

Subject Code: 2724406 Subject Name: Sensor Technology			Date: 03/06/2015	
Tiı	ne:2 truction 1.	:30 pm to 5:00 pm ons: Attempt all questions.	Total Marks:	70
		Make suitable assumptions wherever necessary. Figures to the right indicate full marks.		
Q.1	(a) (b)	Define Sensor. Discuss the classification of sensors. List the characteristics of sensor. Explain any four of them in de	tails.	07 07
Q.2	(a) (b)	Explain about the resistance and capacitance of sensors. Explain hall effect sensor with equivalent circuit of a hall sensor OR	r.	07 07
	(b)	Discuss about input characteristics of interface circuits of senso	rs.	07
Q.3	(a) (b)	Explain mechanical, thermal and electrical analogies of sensors. Explain temperature and thermal properties of sensor material. OR		07 07
Q.3	(a) (b)	Explain different types of voltage to frequency converter for sensors. What is working principle of wheatstone bridge circuit? Derive the equation of sensor bridge sensitivity.		07 07
Q.4	(a) (b)	Which are the different methods for the deposition of thin a Explain any one in details. List the types of detectors which are presently used for the metion associate of people.		07 07
		motion sensing of people. OR		
Q.4	(a)	Discuss LVDT sensor with circuit diagram. List the advant sensors.		07
	(b)	Discuss in brief about different types of material used in sensors		07
Q.5	(a)	Explain the working principle of temperature sensor. Which types of temperature sensors?	are the different	07
	(b)	What is concept of pressure sensor? List different pressure sensor any one in details.	nsor and explain	07
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Q.5	(a) (b)	Discuss different primary and secondary cells for low power ser Which characteristics of an accelerometer should be de calibration.		07 07
