T.E/INSTRU/IV/Choice based

1/1

12.12.18

[Time: Three Hours] [Marks:80]

N.B:
1. Question.No.1 is compulsory.
2. Attempt any three questions from remaining five questions.
3. Assume suitable data wherever necessary.

1		Answer the following	20
	a	Give comparative study of thermal sensors.	
	b	Explain working principle of digital humidity temperature smart sensor.	
	c	Explain MEMS fabrication technique LIGA.	
	d	Explain the need of dissolved oxygen measurement and any one sensor for the same.	
2	a	List various types of sensors based on Physical transduction principle and explain any two.	10
	b	Explain various techniques of etching for MEMS sensor fabrication.	10
3	a	Explain elastomer chemiresistor type chemical sensors.	10
	b	Explain photolithography technique in detail.	10
4	a	Give comparative study of analog to digital converters used for sensor signal conditioning.	10
	b	Explain sensors for soil moisture measurement in agriculture.	10
5	a	Explain construction and working of ADXL345 accelerometer.	10
	b	List various mechanical sensors and explain application of any one sensor in detail.	10
6		Write short note on any two	20
	a	Sensors for food processing	
	b	Thin Film Deposition techniques for MEMS sensor	
	c	Carbon Dioxide Measurement	