

LESSON PLAN

Faculty	Mrs. Renu Bala			
Discipline	ELECTRICAL ENGINEERING			
Semester	5th			
Subject	Instrumentation			
Lesson Plan Duration	15 WEEKS (From Sept 2022)			
Work Load (L/P)	Theory-4,Practicals-02			
Week	Theory		Practical	
	Lect. Day	Topic	Practical Day	Topic
1st	1st	Unit1 Instrument:- Introduction	1st	1. To measure the level of a liquid using a transducer
		Importance of measurement		
	2nd	Basic measuring systems		
	3rd	Advantages and limitations of each measuring systems		
Display devices				
		Revise unit 1		
2nd	4th	Unit 2:-Transducers Theory,	2nd	2. To measure temperature using a thermo-couple
		Construction and use of various transducers Resistance		
	5th	Inductance		
	6th	Capacitance		
3rd	7th	Electromagnetic	3rd	3. Study and use of digital temperature controller
	8th	Piezo electric type		
	9th	Reviseunit2 Assignment1		
4th	10th	Unit 3:-. Measurement of Displacement and Strain: Introduction	4th	File Checking
	11th	Displacement Measuring Devices: wire wound potentiometer		
	12th	LVDT		
5th	13th	Rtrain gauges and their different types such as inductance type	5th	4. Use of themistor in ON/OFF transducer
	14th	Resistive type		
	15th	Wire and foil type		
6th	16th	Gauge factor	6th	5. Study of variable capacitive transducer
	17th	Gauge materials and their selections		
	18th	Use of electrical strain gauges		

7th	19th	Strain gauge bridges and amplifiers	7th	File Checking
	20th	Revise Unite 3		
	21st	Unit:-4 Force and Torque Measurement- Introduction		
8th	22nd	Different types of force measuring devices and their principles_____	8th	6. Draw the characteristics of a potentiometer
	23rd	Load measurements by using elastic transducers and electrical strain gauges		
	24th	Load cells Measurements of torque by brake		
9th	25th	Dynamometer	9th	7. To measure linear displacement using LVDT
	26th	Electrical strain gauges		
	27th	Speed measurements		
10th	28th	Different methods, devices	10th	
	29th	Revise4Unit Assignment2		
	30th	Unit 5:-Pressure Measurement:- Bourdon pressure gauges		
11th	31st	electrical pressure pick ups and their principle	11th	8. To study the use of electrical strain gauge
	32nd	construction and applications Use of pressure cells		
		33rd		
	34th			
12th	35th	thermoelectric thermometers, resistance thermometers	12th	9. To study weighing machine using load cell
	36th	thermocouple, thermisters and pyrometer. Temperature recorders		
	37th	Revise 7th unit and 3rd assignment		
13th	38th	unit 8:-introduction	13th	10. To study pH meter.
	39th	Measurement of other non electrical quantities such as humidity		
	40th	pH level and vibrations		
14th	41st	Revision of Unit 8	14th	File Checking
	42nd	Distribution of Old Question Papers		
	43rd	Solution to 2 marks Questions		
15th	44th	Solution to 4 marks Questions	15th	Viva Voce
	45th	Solution to 10 marks Questions		

