


  
 Receipt No. 2073/18
   
 Dated 17-1-18
   
 OT 11:00 AM
   
 17/1/18

### LESSON PLAN

Sh. Bijendra K
   
 SC
   
 17/1/18

NAME OF FACULTY	ABHISHEK GARG
DISCIPLINE	ELECTRICAL ENGINEERING
SEMESTER	4 <sup>th</sup>
SUBJECT	INSTRUMENTATION
LESSON PLAN DURATION	15 WEEKS (FROM JANUARY 2018 - APRIL 2018)

THEORY			THEORY		
WEEK	LECTURE DAY	TOPIC	WEEK	LECTURE DAY	TOPIC
1	1	Measurements: Importance of measurement	8	1	electrical pressure pick ups
	2	basic measuring systems		2	principle,
	3	advantages and limitations of each measuring systems		3	Use of pressure cells.
	4	display devices		4	Problems
2	1	Transducers: Theory, construction and	9	1	Flow Measurement: Basic principles of magnetic
	2	use of various transducers (resistance		2	and ultrasonic flow meters
	3	inductance		3	Problems
	4	capacitance, electromagnetic,		4	Problems
3	1	piezo electric type)	10	1	Measurement of Temperature: Bimetallic thermometer,
	2	Problems		2	thermoelectric thermometers
	3	Problems		3	resistance thermometers,
	4	Measurement of Displacement and Strain: Displacement Measuring Devices: wire wound potentiometer		4	thermocouple, thermistors and pyrometer. Temperature recorders
4	1	LVDT, strain gauges and their different types such as inductance type	11	1	Problems

	2	resistive type, wire and foil type etc. Gauge factor		2	Measurement of other non electrical quantities
	3	gauge materials and their selections.		3	quantities such as humidity
	4	Use of electrical strain gauges,		4	pH level
5	1	strain gauge bridges and amplifiers.	12	1	vibrations
	2	Problems		2	electrical pressure pick ups
	3	Force and Torque Measurement: Different types of force measuring devices and their principles,		3	principle,
	4	load measurements by using elastic transducers		4	Use of pressure cells.
6	1	and electrical strain gauges.	13	1	Measurement of Displacement and Strain: Displacement Measuring Devices: wire wound potentiometer
	2	Load cells, measurements of torque by brake,		2	LVDT, strain gauges and their different types such as inductance type
	3	dynamometer, electrical strain gauges,		3	resistive type, wire and foil type etc. Gauge factor
	4	speed measurements		4	gauge materials and their selections.
7	1	different methods, devices	14	1	Transducers: Theory, construction and
	2	Problems		2	use of various transducers (resistance
	3	Problems		3	inductance
	4	Pressure Measurement: Bourdon pressure gauges,		4	capacitance, electromagnetic,
15	1	electrical pressure pick ups principle	15	3	Use of electrical strain gauges,
	2	Use of pressure cells.		4	strain gauge bridges and amplifiers.

*Aditya*  
17/1/18