Lesson plan

Name of the faculty : Mr. Manoj Bansal

Discipline : Electrical & Electronics Engineering

Semester : 5th

Subject : Electronic Measurement and Instrumentation(P. Code:PCC-EEE-313-G)

Lesson Plan Duration : 15 weeks (From August, 2020 to November 2020)

Work Load (Lecture/ Practical) per week (in hours): Lecture-02, Practical-01

Week	**Theory**		**Practical**	
	Lecture day	**Topic(Including assignment/test)**	**Practical Day**	**Topic**
1st	1st	OSCILLOSCOPE: Block diagram, study of various stages in brief	1st	Study blocks wise construction of a analog oscilloscope & Function generator
	2nd	high frequency CRO considerations		
2nd	1st	Sampling and storage oscilloscope	2nd	Study blocks wise construction of a Multimeter & frequency counter
	2nd	GENERATION & ANALYSIS OF WAVEFORMS: Block diagram of pulse generators		
3rd	1st	signal generators, function generators wave analysers	3rd	Study Measurement of different components & parameters like Q of a coil etc using LCRQ meter
	2nd	distortion analysers, spectrum analyser		
4th	1st	Harmonic analyser, introduction to power analyser	4th	Study of distortion factor meter and determination of the % distortion of the given oscillator
	2nd	ELECTRONIC INSTRUMENTS: Instruments for measurement of voltage, current		
5th	1st	other circuit parameters, Q meters	5th	Determine output

	2nd	R.F. power measurements, introduction to digital meters		characteristics of a LVDT and Measure displacement using LVDT
6th	1st	FREQUENCY & TIME MEASUREMENT: Study of decade counting Assembly(DCA),	6th	Study characteristics of temperature transducer like Thermocouple, Thermistor & RTD with implementation of a small project using signal conditioning circuits like instrumentation amplifier
	2nd	frequency measurements, period measurements		
7th	**Sessional -I Examination+Activity**			
8th	1st	universal counter, introduction to digital meters	8th	Measurement of Strain using Strain Guage
	2nd	DISPLAY DEVICES: Nixie tubes,		
9th	1st	LED's LCD's,	9th	To study differential pressure transducer & signal conditioning of output signal
	2nd	discharge devices		
10th	1st	TRANSDUCERS: Classification,	10th	Measurement of level using capacitive transducer
	2nd	Transducers of types: RLC photocell		
11th	1st	thermocouples	11th	Study of Distance measurement using ultrasonic transducer
	2nd	basic schemes of measurement of displacement		
12th	1st	velocity, acceleration	12th	
	2nd	strain, pressure		

13th	1st	liquid level & temperature	13th	
	2nd	INTRODUCTION TO SIGNAL CONDITIONING: DC signal conditioning system		
14th	1st	AC signal conditioning system	14th	
	2nd	data acquisition		
15th	1st	conversion system	15th	
	2nd	-----Revision----		
16th	1st	-----Revision----		
	2nd	-----Revision----		
17th	**Sessional -II Examination+Activity**			

Faculty Signature