LESSON PLAN-2022-23 SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR		
DISCIPLINE-ETC	**Semester- 3RD**	**Name of teaching faculty-ER. ASHOK KUMAR PRUSTY**
SUBJECT-EMI	**No of days/ per week class alloted-4**	**SEM From date- 15/09/2022 No of weeks-16**
Week	**Class day**	**Theory Topics**
3RD	13.09.22	**Qualities of Measurement**
	14.09.22	Discuss the Static Characteristics,
	16.09.22	Accuracy, sensitivity, reproducibility & static error of instruments
	17.09.22	Dynamic characteristics& speed of instruments.
4TH	20.09.22	Errors of an instrument & explain various types.
	21.09.22	**Indicating Instruments**
	23.09.22	Introduction to Indicator & Display devices & its types
	24.09.22	Basic principle of meter movement, permanent magnetic moving coil movement & its advantages & disadvantages.
5TH	27.09.22	Operation of Moving Iron Instrument
	28.09.22	Basic principle of operation of DC Ammeter and Multi range Ammeter
	30.09.22	Basic principle of operation of AC Ammeter and Multi range Ammeter
1ST	1.10.22	Basic principle of operation of DC Voltmeter and its applications
2ND	7.10.22	Basic principle of operation of AC Voltmeter and its application
	8.10.22	Basic principle of Ohm Meter (Series & Shunt type)
3RD	11.10.22	Basic principle of Analog Multimeter, its types & applications
	12.10.22	Operation of Q meter and its essentials
	14.10.22	**Digital Instruments**
	15.10.22	Principle of operation of Ramp type Digital Voltmeter & applications
4TH	18.10.22	Operation of display of 3 1/2, 4 1/2– Digital Multimeter & Resolution and Sensitivity
	19.10.22	Basic principle of operation of working of Digital Multimeterits types & applications
	21.10.22	Basic principle of operation of working of Digital Frequency Meter

	22.10.22	Operation of working of Digital Measurement of Time
5TH	26.10.22	Measurement of Frequency.
	28.10.22	Principle of operation of working of Digital Tachometer
	29.10.22	Principle of operation of working of Automation in Digital Instruments (Polarity Indication, Ranging, Zeroing & Fully Automatic)
1ST	1.11.22	Block diagram of LCR meter & its working principle.
	2.11.22	**Oscilloscope**
	4.11.22	Basic principle of Oscilloscope& its Block Diagram
	5.11.22	Basic principle & Block diagram of CRO, Dual Trace Oscilloscope & its specification
2ND	9.11.22	CRO Measurements, Lissajous figures
	11.11.22	Applications of Oscilloscope (Voltage period & frequency measurement)
	12.11.22	Operation of Digital Storage Oscilloscope& High frequency Oscilloscope
3RD	15.11.22	**Bridges**
	16.11.22	Types of Bridges (DC& Ac Bridges)
	18.11.22	DC Bridges (Measurement of Resistance by Wheatstone's Bridge)
	19.11.22	AC bridges (Measurement of inductance by Maxwell's Bridge & by Hay's Bridge
4TH	22.1122	Measurement of capacitance by Schering's Bridge & DeSauty Bridge.
	23.11.22	Working principle of Q meter its circuit diagram & measurement of Low impedance
	25.11.22	Measurement of frequenc
	26.11.22	LCR Meter & its measurements
5TH	29.11.22	**Transducers & Sensor**
	30.11.22	Parameter, method of Selecting & advantage of Electrical Transducer & Resistive Transducer
1ST	2.12.22	Working principle of Strain Gauges, define Strain Gauge (No mathematical Derivation)
	3.12.22	Working principle of LVDT
2ND	6.12.22	Working principle of capacitive transducers (pressure)
	7.12.22	Working principle of Load Cell (Pressure Cell)

	9.12.22	Working principle of Temperature Transducer (RTD, Optical Pyrometer, Thermocouple, Thermister)
	10.12.22	Working principle of Current transducer and KW Transducer.
3RD	13.12.22	Working principle of Proximity & Light sensors.
	14.12.22	**Signal Generator, Wave Analyser & DAS**
	16.12.22	General aspect & classification of Signal generators
	17.12.22	Working principle of AF Sine & Square wave generator .

H.O.D
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