

LESSON PLAN-2021-2023		
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR		
Discipline-ELECTRICAL	Semester-4TH	Name of teaching faculty- ANIL KU. SAHOO
SUBJECT-EMI	No of days/ per week class allotted-5	SEM From date-16/01/2024 No of weeks-
Week	Class day	Theory Topics
		MEASURING INSTRUMENTS .
4TH	16/01/2024	1.1 Define Accuracy, precision, Errors
	17/01/2024	Resolutions Sensitivity and tolerance.
	19/01/2024	1.2 Classification of measuring instruments.
	20/01/2024	1.3 Explain Deflecting, controlling and damping arrangements in indicating type of instruments
	22/01/2024	CONTINUE
	23/01/2024	1.4 Calibration of instruments.
	24/01/2024	ANALOG AMMETERS AND VOLTMETERS :
	27/01/2024	2.1. Describe Construction, principle of operation, errors, ranges merits and demerits of
1ST	29/01/2024	2.1.1 Moving Iron type instruments.
	30/01/2024	CONTINUE
	31/01/2024	2.1.2 Permanent Magnet Moving coil type instruments.
	2/02/2024	CONTINUE
2ND	3/02/2024	2.1.3 Dynamometer type instruments
	5/02/2024	CONTINUE
	6/02/2024	2.1.4 Rectifier type instruments
	7/02/2024	CONTINUE
	8/02/2024	2.1.5 Induction type instruments
3RD	9/02/2024	CONTINUE
	10/02/2024	2.2 Extend the range of instruments by use of shunts and Multipliers.
	12/02/2024	2.3 Solve Numerical
	13/02/2024	2.3 Solve Numerical

	15/02/2024	WATTMETERS AND MEASUREMENT OF POWER .
	16/02/2024	3.1 Describe Construction, principle of working of Dynamometer type wattmeter.
4TH	17/02/2024	(LPF and UPF type)
	19/02/2024	CONTINUE
	20/02/2024	3.2 The Errors in Dynamometer type wattmeter and methods of their correction
	21/02/2024	CONTINUE
	23/02/2024	3.3 Discuss Induction type watt meters.
	24/02/2024	CONTINUE
5TH	26/02/2024	ENERGYMETERS AND MEASUREMENT OF ENERGY
	27/02/2024	4.1 Introduction
	28/02/2024	4.2 Single Phase Induction type Energy meters – construction, working principle
	1/03/2024	compensation & adjustments.
1ST	2/03/2024	4.3 Testing of Energy Meters.
	4/03/2024	CONTINUE
	5/03/2024	MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR and
	6/03/2024	5.1 Tachometers, types and working principles
	9/03/2024	5.1 Tachometers, types and working principles
2ND	11/03/2024	5.2 Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters.
	12/03/2024	CONTINUE
	13/03/2024	5.3 Principle of operation and working of Dynamometer type single phase pf meter
	15/03/2024	Three phase power factor meters.
	16/03/2024	MEASUREMENT OF RESISTANCE, INDUCTANCE & CAPACITANCE
3RD	18/03/2024	6.1 Classification of resistance 6.1.1. Measurement of low resistance by potentiometer method 6.1.2. Measurement of medium resistance by wheat Stone bridge method
	19/03/2024	6.1.3. Measurement of high resistance by loss of charge method.
	20/03/2024	6.2 Construction, principle of operations of Megger & Earth tester for Insulation resistance and earth resistance measurement

		respectively. 6.3 Construction
	22/03/2024	CONTINUE
	23/03/2024	6.3. Principles of Multimeter. (Analog and Digital)
	25/03/2024	6.4 Measurement of Inductance by Maxewell's Bridge method.
4TH	27/03/2024	6.5 Measurement of capacitance by Schering Bridge method
	29/03/2024	SENSORS AND TRANSDUCER
	30/03/2024	7.1. Define Transducer, sensing element or detector element and transduction elements
	1/04/2024	7.2. Classify transducer. Give examples of various class of transducer.
	2/04/2024	CONTINUE
	3/04/2024	7.3. Resistive transducer
1ST	6/04/2024	7.3.1 Linear and angular motion potentiometer.
	8/04/2024	7.3.2 Thermistor and Resistance thermometers.
	9/04/2024	7.3.3 Wire Resistance Strain Gauges
	10/04/2024	7.4. Inductive Transducer
	12/04/2024	7.4.1 Principle of linear variable differential Transformer (LVDT)
	13/04/2023	7.4.2 Uses of LVDT. 7.5. Capacitive Transducer
2ND	15/04/2024	7.5.1 General principle of capacitive transducer
	16/04/2024	7.5.2 Variable area capacitive transducer. 7.5.3 Change in distance between plate capacitive transducer.
	17/04/2024	7.6. Piezo electric Transducer and Hall Effect Transducer with their applications
	19/04/2024	OSCILLOSCOPE
	20/04/2024	8.1. Principle of operation of Cathode Ray Tube. 8.2. Principle of operation of Oscilloscope (with help of block diagram)
	22/04/2024	8. 8.3. Measurement of DC Voltage & current.
3RD	23/04/2024	8.4. Measurement of AC Voltage, current, phase & frequency.

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