

BHUBANANANDA ORISSA SCHOOL OF
ENGINEERING, CUTTACK
ELECTRICAL ENGG.DEPARTMENT

LESSON PLAN

SEMESTER: 4TH (A)

SESSION – SUMMER (2022-23)

SUBJECT: EM&I

NAME OF FACULTY: SUKANTA KUMAR NANDI

Electrical Engg.	Semester: 4 th (A)	Name of the teaching faculty: SUKANTA KU. NANDI
Subject-EM&I	No. of Days/per week class allotted: 05 PERIODS /WEEK (MON-1,WED-2,THUR-2 PERIOD)	Semester: From Date: 14/02/2023 To Date: 23/05/2023 No. of weeks: 15 WEEKS
Week	Class Day	Theory/Practical Topics
1 st (14/02/2023-18/02/2023)	15/02/2023	1.MEASURING INSTRUMENTS 1.1 Define Accuracy, precision, Errors, Resolutions Sensitivity and tolerance.
	15/02/2023	1.MEASURING INSTRUMENTS 1.1 Define Accuracy, precision, Errors, Resolutions Sensitivity and tolerance
	16/02/2023	1.2 Classification of measuring instruments
	16/02/2023	1.3 Explain Deflecting, controlling and damping arrangements in indicating type of instruments
2 nd (20/02/2023-25/02/2023)	20/02/2023	1.3 Explain Deflecting, controlling and damping arrangements in indicating type of instruments
	22/02/2023	1.4 Calibration of instruments.
	22/02/2023	1.4 Calibration of instruments.
	23/02/2023	2.ANALOG AMMETERS AND VOLTMETERS Describe Construction, principle of operation, errors, ranges merits and demerits of 2.1 Moving iron type instruments.
	23/02/2023	2.ANALOG AMMETERS AND VOLTMETERS Describe Construction, principle of operation, errors, ranges merits and

	22/03/2023	3.2 What are the Errors in Dynamometer type wattmeter and methods of their correction
	22/03/2023	3.2 What are the Errors in Dynamometer type wattmeter and methods of their correction
	23/03/2023	3.3 Discuss Induction type wattmeter
7 th (27/03/2023-01/04/2023)	23/03/2023	3.3 Discuss Induction type wattmeter
	27/03/2023	4. ENERGY METERS AND MEASUREMENT OF ENERGY 4.1 Introduction
	29/03/2023	4.2. Single Phase Induction type Energy meters construction, working principle and their compensation and adjustments.
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	30/03/2023	RAM NAVAMI
	30/03/2023	RAM NAVAMI
8 th (03/04/2023-08/04/2023)	03/04/2023	4.3 Testing of Energy Meter
	05/04/2023	4.3 Testing of Energy Meter
	05/04/2023	5. MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR 5.1 Tachometers, types and working principles
	06/04/2023	5.1 Tachometers, types and working principles
	06/04/2023	5.2 Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters
9 th (10/04/2023-15/04/2023)	10/04/2023	5.2 Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters

	01/05/2023	6.4 Measurement of inductance by Maxwell's Bridge method.
	03/05/2023	7. SENSORS AND TRANSDUCER 7.1 Define transducer, sensing elements detector element and transduction elements
	03/05/2023	7. SENSORS AND TRANSDUCER 7.1 Define transducer, sensing elements detector element and transduction elements
	04/05/2023	7.2 Classify transducer, give examples of various class of transducer.
	04/05/2023	7.3 Resistive transducer
13th (08/05/2023-13/05/2023)	08/05/2023	QUIZ TEST
	10/05/2023	7.3.1 Linear and angular motion potentiometer
	10/05/2023	7.3.2 Thermistor and resistance thermometers 7.3.3 Wire Resistance Strain Gauge
	11/05/2023	7.4 Inductive transducer 7.4.1 principle of LVDT 7.4.2 Use of LVDT 7.5 Capacitive transducer
	11/05/2023	7.5.1 general principle of Capacitive transducer 7.5.2 Variable area Capacitive transducer
14th (15/05/2023-20/05/2023)	15/05/2023	7.5.3 Change in distance between plate Capacitive transducer 7.1 Piezo electric transducer and their application
	17/05/2023	8. OSCILLOSCOPE 8.1 of cathode ray tube. 8.2 Principle of operation of oscilloscope (with help of block diagram.)

	17/05/2023	8.1 of cathode ray tube 8.2 Principle of operation of oscilloscope (with help of block diagram)
	18/05/2023	8.3 Measurement of DC voltage and current 8.4 Measurement of AC voltage and current, phase and frequency
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15th (22/05/2023-27/05/2023)	22/05/2023	Doubt solving Previous year question solution