BHUBANANANDA ORISSA SCHOOL OF

ENGINEERING, CUTTACK

ELECTRICAL ENGG.DEPARTMENT

LESSON PLAN

SEMESTER: 4TH (B)

SESSION – SUMMER (2021-22)

SUBJECT: EMMI

NAME OF FACULTY: SUKANT KUMAR NANDI

Discipline: **Electrical Engg.**	Semester: **4Th (B)**	Name of the teaching faculty: **S.K.NANDI**
Subject-**EMMI**	No. of Days/per week class allotted: **05 PERIODS /WEEK (MON-2,TUE-1,FRI-1,SAT-1 PERIOD)**	Semester: From Date: **10/03/2022** To Date: **10/06/2022** No. of weeks: **14 WEEKS**
Week	**Class Day**	**Theory/Practical Topics**
1st (10/03/2022-12/03/2022)	11/03/2022	**1.MEASURING INSTRUMENTS** 1.1Define Accuracy, precision, Errors, Resolutions Sensitivity and tolerance.
	12/03/2022	1.2Classification of measuring instruments
2nd (14/03/2022-19/03/2022)	14/03/2022	1.3Explain Deflecting, controlling and damping arrangements in indicating type of instruments
	14/03/2022	1.3Explain Deflecting, controlling and damping arrangements in indicating type of instruments
	15/03/2022	1.4Calibration of instruments.
	18/03/2022	**DOLA PURNIMA**
	19/03/2022	**HOLI**
3rd (21/03/2022-26/03/2022)	21/03/2022	**2.ANALOG AMMETERS AND VOLTMETERS** Describe Construction, principle of operation, errors, ranges merits and demerits of 2.1Moving iron type instruments.

	21/03/2022	Describe Construction, principle of operation, errors, ranges merits and demerits of 2.2Permanent Magnet Moving coil type instruments
	22/03/2022	Describe Construction, principle of operation, errors, ranges merits and demerits of 2.2Permanent Magnet Moving coil type instruments
	25/03/2022	Describe Construction, principle of operation, errors, ranges merits and demerits of 2.3Dynamometer type instruments
	26/03/2022	Describe Construction, principle of operation, errors, ranges merits and demerits of 2.3Dynamometer type instruments
4th (28/03/2022-02/04/2022)	28/03/2022	2.3Dynamometer type instruments 2.4 rectifier type
	28/03/2022	2.4 rectifier type
	29/03/2022	2.5 Induction type instrument
	01/04/2022	UTKAL DIBAS
	02/04/2022	2.5 Induction type instrument
5TH (04/04/2022-09/04/2022)	04/04/2022	2.6 Extend the range of instruments by use of shunts and Multipliers2.7 Solve Numerical type)
	04/04/2022	**3.WATTMETERS AND MEASUREMENT OF POWER** 3.1DescribeConstruction, principle of working of Dynamometer

		type wattmeter(LPF &UPF type)
	05/04/2022	**CLASS TEST**
	08/04/2022	3.1DescribeConstruction, principle of working of Dynamometer type wattmeter(LPF &UPF type)3.2What are the Errors in Dynamometer type wattmeter and methods of their correction
	09/04/2022	3.1DescribeConstruction, principle of working of Dynamometer type wattmeter(LPF &UPF type)
6TH (11/04/2022-16/04/2022)	11/04/2022	3.2What are the Errors inDynamometer type wattmeter and methods of their correction
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	12/04/2022	3.2What are the Errors inDynamometer type wattmeter and methods of their correction
	15/04/2022	**GOOD FRIDAY**
	16/04/2022	3.2What are the Errors inDynamometer type wattmeter and methods of their correction 3.3 Discuss Induction type wattmeter .
7th (18/04/2022-23/04/2022)	18/04/2022	3.3 Discuss Induction type wattmeter
	18/04/2022	**4.ENERGYMETERS AND MEASUREMENT OF ENERGY** 4.1 Introduction
	19/04/2022	4.2.SinglePhase Induction type Energy meters construction, working principle and their compensation and adjustments.
	22/04/2022	4.2.SinglePhase Induction type Energy meters

		construction, working principle and their compensation and adjustments
	23/04/2022	4.2.SinglePhase Induction type Energy meters construction, working principle and their compensation and adjustments.
8th (25/04/2022-30/04/2022)	25/04/2022	4.2.SinglePhase Induction type Energy meters construction, working principle and their compensation and adjustments
	25/04/2022	4.3TestingofEnergyMeter
	26/04/2022	4.3TestingofEnergyMeter
	29/04/2022	**5.MEASUREMENT OF SPEED, FREQUENCYANDPOWERFACTOR** 5.1 Tachometers, types and working principles
	30/04/2022	5.1 Tachometers, types and working principles
9th (01/05/2022-07/05/2022)	02/05/2022	5.2Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters
	02/05/2022	5.2Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters
	03/05/2022	**ID-UL-FITRE**
	05/05/2022	**CLASS TEST**
	06/05/2022	5.2Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters
	07/05/2022	5.3Principle of operation and working of Dynamometer type

		single phase and three phase power factor meters
10th (09/05/2022-14/05/2022)	09/05/2022	5.3Principle of operation and working of Dynamometer type single phase and three phase power factor meters
	09/05/2022	5.3Principle of operation and working of Dynamometer type single phase and three phase power factor meters
	10/05/2022	**INTERNAL ASSESSMENT**
	13/05/2022	**6.MEASUREMENT OF RESISTANCE** 6.1Classification of resistance
	14/05/2022	**6.MEASUREMENT OF RESISTANCE** 6.1Classification of resistance 6.1.1Measurement of low resistance by potentiometer method
11th (16/05/2022-21/05/2022)	16/05/2022	**BUDDHA PURNIMA**
	16/05/2022	**BUDDHA PURNIMA**
	17/05/2022	6.1.2Measurement of medium resistance by Wheatstone bridge method
	20/05/2022	6.1.3 Measurement of high resistance by loss of charge method.
	21/05/2022	6.2construction&principle of operations (meggers) &Earth Tester For Insulation Resistance And earth resistance measurement respectively.
12th (23/05/2022-28/05/2022)	23/05/2022	6.2construction&principle of operations (meggers) &Earth Tester For Insulation Resistance And earth resistance measurement respectively.
	23/05/2022	6.2construction&principle of operations (meggers) &Earth Tester For Insulation Resistance And earth resistance measurement respectively.
	24/05/2022	6.3construction and principles of Multimeter (analog&digital).
	27/05/2022	6.4Measurement of inductance by Maxewell's Bridge method. 6.5 measurement of capacitance by Schering Bridge method.

	28/05/2022	**7.SENSORS AND TRANSDUCER** 7.1Define transducer, sensing elements detector element and transduction elements7.2Classify transducer, give examples of various class of transducer.
13th (30/05/2022-04/06/2022)	30/05/2022	**SABITRI AMABASYA**
	30/05/2022	**SABITRI AMABASYA**
	31/05/2022	7.3Resistive transducer 7.3.1Linear and angular motion potentiometer 7.3.2Thermistorandresistance thermometers7.3.3WireResistanceStrainGauge
	03/06/2022	7.4Inductive transducer 7.4.1principleof LVDT 7.4.2Use of LVDT 7.5Capacitive transducer
	04/06/2022	7.5.1general principle of Capacitive transducer 7.5.2VariableareaCapacitivetransducer 7.5.3Change in distance between plate Capacitive transducer7.1Piezo electric transducer and their application
14th (06/06/2022-10/06/2022)	06/06/2022	**8.OSCILLOSCOPE** 8.1of cathode ray tube. 8.2Principle of operation of oscilloscope(with help of block diagram.)
	06/06/2022	8.2Principle of operation of oscilloscope(with help of block diagram.)
	07/06/2022	**CLASS TEST** Doubt solving Previous year question solution MCQ discussion
	10/06/2022	8.3Measurement of DC voltage and current8.4Measurement of AC voltage and current, phase and frequency Doubt solving