

Discipline - Electrical Engg	SEMESTER 4 th	NAME OF THE TEACHING FACULTY- SIBANI PANDA, LECT(ELECT)	
SUB- EM&I	No Of Days Per Week Class Allotted- 4P	SEMESTER FROM 14.02.2023 TO 25.05.2023 NO OF WEEK – 15 WEEKS	
WEEK	CLASS DAY	THEORY	STATUS
1 st week	1 ST day 2 nd day 3 rd day 4 th day 5 TH day	1. MEASURING INSTRUMENTS 1.1 Define Accuracy, precision, Errors, Resolutions Sensitivity and tolerance. 1.2 Classification of measuring instruments. 1.3 Explain Deflecting, controlling and damping arrangements in indicating type of instruments.	completed
2 nd week	1 ST day 2 nd day 3 rd day 4 th day 5 th day	1.4 Calibration of instruments 2. ANALOG AMMETERS AND VOLTMETERS 2.1. Describe Construction, principle of operation, errors, ranges merits and demerits of: 2.1.1 Moving iron type instruments.	completed
3 rd week	1 ST day 2 nd day 3 rd day 4 th day 5 th day	2.1.2 Permanent Magnet Moving coil type instruments. 2.1.3 Dynamometer type instruments 2.1.4 Rectifier type instruments	completed
4 th week	1 ST day 2 nd day 3 rd day 4 th day 5 th day	2.1.5 Induction type instruments 2.2 Extend the range of instruments by use of shunts and Multipliers. 2.3 Numerical 3. WATTMETERS AND MEASUREMENT OF POWER 3.1 Describe Construction of wattmeter	completed
5 th week	1 ST day 2 nd day 3 rd day 4 th day 5 th day	3.1.1 Principle of working of Dynamometer type wattmeter. 3.1.2 LPF and UPF type 3.1.3 production of torque and measurement of power 3.2 The Errors in Dynamometer type wattmeter and methods of their correction.	completed

6 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>3.3 Induction type watt meters. 3.3.1 construction 3.3.2 phasor diagram and deflecting torque production</p> <p>4. ENERGYMETERS AND MEASUREMENT OF ENERGY 4.1 Introduction 4.2 Single Phase Induction type Energy meters – construction,</p>	completed
7 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>working principle Errors in energy meter their compensation & adjustments</p> <p>4.3 Testing of Energy Meters Numerical related to energy meter Class test upto 4th chapter</p>	completed
8 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>5. MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR 5.1 Tachometers, types working principles govt holiday</p>	completed
9 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>Govt holiday</p> <p>5.2 Principle of operation and construction of Electrical resonance Type frequency meters. Principle of operation and construction of Mechanical resonance Type frequency meters.</p>	completed
10 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>5.3 Principle of operation and working of Dynamometer type single phase and three phase power factor meters</p> <p>6. MEASUREMENT OF RESISTANCE, INDUCTANCE & CAPACITANCE 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. 6.1..3. Measurement of high resistance by loss of charge method.</p>	completed
11 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>6.2 Construction, principle of operations of Megger & Earth tester for insulation resistance and earth resistance measurement respectively.</p> <p>Taken CL</p>	completed
12 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	<p>Taken CL</p> <p>6.3 Construction and principles of Multimeter. Analog Digital</p>	completed

13 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	6.4 Measurement of inductance by Maxwell's Bridge method. 6.5 Measurement of capacitance by Schering Bridge method 7. SENSORS AND TRANSDUCER 7.1. Define Transducer, sensing element or detector element and transduction elements. 7.2. Classify transducer. Give examples of various class of transducer.	completed
14 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	7.3. Resistive transducer 7.3.1 Linear and angular motion potentiometer. 7.3.2 Thermistor and Resistance thermometers. 7.3.3 Wire Resistance Strain Gauges	completed
15 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	7.4. Inductive Transducer 7.4.1 Principle of linear variable differential Transformer (LVDT) 7.4.2 Uses of LVDT. 7.5. Capacitive Transducer. 7.5.1 General principle of capacitive transducer. 7.5.2 Variable area capacitive transducer. 7.5.3 Change in distance between plate capacitive transducer. 7.6. Piezo electric Transducer and Hall Effect Transducer with their applications.	completed
16 TH WEEK	1 ST day 2 ND day 3 RD day 4 TH day 5 TH day	8. OSCILLOSCOPE 8.1. Principle of operation of Cathode Ray Tube. 8.2. Principle of operation of Oscilloscope (with help of block diagram). 8.3. Measurement of DC Voltage & current. 8.4. Measurement of AC Voltage, current, phase & frequency	completed