
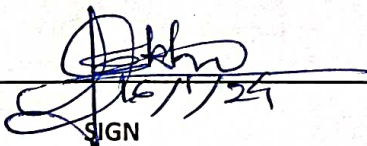


**LESSON PLAN SUMMER-2024**  
**NAME- AKASH RAJAK      SUBJECT- EMI   SEM-4TH (E2)**  
**BRANCH-ELECTRICAL ENGG**

**DATE- 16.01.2024 TO 24.04.2024**

SL.NO	WEEK NO.	TOPICS TO BE COVERED	NO. of Periods
1	1	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. 1.4 Calibration of instruments.	4
2	2	2.1. Describe Construction, principle of operation, errors, ranges merits and demerits of: 2.1.1 Moving iron type instruments. 2.1.2 Permanent Magnet Moving coil type instruments. 2.1.3 Dynamometer type instruments	5
3	3	2.1.4 Rectifier type instruments 2.1.5 Induction type instruments. 2.2 Extend the range of instruments by use of shunts and Multipliers. 2.3 Solve Numerical	5
4	4	<b>WATTMETERS AND MEASUREMENT OF POWER</b> 3.1 Describe Construction, principle of working of Dynamometer type wattmeter. (LPF and UPF type) 3.2 The Errors in Dynamometer type wattmeter and methods of their correction	3
5	5	3.3 Discuss Induction type watt meters <b>ENERGYMETERS AND MEASUREMENT OF ENERGY</b> 4.1 Introduction 4.2 Single Phase Induction type Energy meters – construction, working principle and their compensation & adjustments	5
6	6	4.3 Testing of Energy Meters <b>MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR</b> 5.1 Tachometers, types and working principles 5.2 Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters.	5
7	7	5.3 Principle of operation and working of Dynamometer type single phase and three phase power factor meters <b>MEASUREMENT OF RESISTANCE, INDUCTANCE&amp; CAPACITANCE</b> 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..	4
8	8	6.1..3. Measurement of high resistance by loss of charge method. 6.2 Construction, principle of operations of Megger & Earth tester for insulation resistance and earth resistance measurement respectively.	4

9	9	6.3 Construction and principles of Multimeter. (Analog and Digital) 6.4 Measurement of inductance by Maxewell's Bridge method. 6.5 Measurement of capacitance by Schering Bridge method	5
10	10	<b>SENSORS AND TRANSDUCER</b> 7.1. Define Transducer, sensing element or detector element and transduction elements. 7.2. Classify transducer. Give examples of various class of transducer.	5
11	11	7.3. Resistive transducer motion potentiometer. Resistance thermometers. Resistance Strain Gauges 7.3.1 Linear and angular 7.3.2 Thermistor and 7.3.3 Wire 7.4. Inductive Transducer	5
12	12	7.4.1 Principle of linear variable differential Transformer (LVDT) Uses of LVDT. 7.4.2	4
13	13	7.5. Capacitive Transducer. transducer. between plate capacitive transducer. 7.5.1 General principle of capacitive 7.5.2 Variable area capacitive 7.5.3 Change in distance	5
14	14	7.6. Piezo electric Transducer and Hall Effect Transducer with their applications <b>OSCILLOSCOPE</b> Cathode Ray Tube. Oscilloscope (with block diagram). 8.1. Principle of operation of 8.2. Principle of operation of	4
15	15	8.3. Measurement of DC Voltage & current. 8.4. Measurement of AC Voltage, current, phase & frequency	2

 Prepared by <b>AKASH RAJAK</b>	 SIGN <b>Academic Co-ordinator</b>
---	--