Academic lesson plan for summer semester - 2023

Name of the teaching faculty: **UMESH CHANDRA SETHI**
Semester: **4th**
No. of periods per week: **5**
semester Exam: **80**
Total Marks: **100**

Discipline / Dept.: **EE**
Subject (Theory): **EM&I**
Total Periods: **75**
Class Test: **20**

Week	Period	Unit/chapter	Topic to be covered
1ST	1st	MEASURING INSTRUMENTS	Define Accuracy, precision, Errors, Resolutions Sensitivity
	2nd	MEASURING INSTRUMENTS	Classification of measuring instruments.
	3rd	MEASURING INSTRUMENTS	Explain Deflecting, controlling and damping arrangements in indicating type of
	4th	MEASURING INSTRUMENTS	Calibration of instruments
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basic instrument
2ND	1st	ANALOG AMMETERS AND VOLTMETERS	Describe Construction, principle of operation, errors, ranges merits and demerits of Moving iron type instrument
	2nd	ANALOG AMMETERS AND VOLTMETERS	Permanent Magnet Moving coil type instruments
	3rd	ANALOG AMMETERS AND VOLTMETERS	Dynamometer type instruments
	4th	ANALOG AMMETERS AND VOLTMETERS	Rectifier type instruments
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Dout clear class & Objective type question
3RD	1st	ANALOG AMMETERS AND VOLTMETERS	Induction type instruments
	2nd	ANALOG AMMETERS AND VOLTMETERS	Extend the range of instruments by use of shunts and Multipliers
	3rd	ANALOG AMMETERS AND VOLTMETERS	Solve Numerical
	4th	ANALOG AMMETERS AND VOLTMETERS	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	
4TH	1st	WATTMETERS AND MEASUREMENT OF POWER	Describe Construction, principle of working of Dynamometer type wattmeter. (LPF and UPF type)
	2nd	WATTMETERS AND MEASUREMENT OF POWER	Describe Construction, principle of working of Dynamometer type wattmeter. (LPF and UPF type)
	3rd	WATTMETERS AND MEASUREMENT OF POWER	The Errors in Dynamometer type wattmeter and methods of their correction.
	4th	WATTMETERS AND MEASUREMENT OF POWER	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to power measurement
5TH	1st	WATTMETERS AND MEASUREMENT OF POWER	Induction type watt meters.
	2nd	ENERGYMETERS AND MEASUREMENT OF ENERGY	Introduction of energy meter
	3rd	ENERGYMETERS AND MEASUREMENT OF ENERGY	Single Phase Induction type Energy meters – construction, working principle and their compensation & adjustments & Testing of Energy Meters
	4th	ENERGYMETERS AND MEASUREMENT OF ENERGY	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to wattmeter
6TH	1st	MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR	Tachometers, types and working principle
	2nd		Principle of operation and construction of Mechanical and

	3rd	MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR	Electrical resonance Type frequency meters.
	4th		Principle of operation and working of Dynamometer type single phase and three phase power factor meters.
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to frequency
7TH	1st	MEASUREMENT OF RESISTANCE, INDUCTANCE& CAPACITANCE	Measurement of high resistance by loss of charge method
	2nd	MEASUREMENT OF RESISTANCE, INDUCTANCE& CAPACITANCE	Construction, principle of operations of Megger & Earth tester for insulation resistance and earth resistance measurement respectively
	3rd	MEASUREMENT OF RESISTANCE, INDUCTANCE& CAPACITANCE	
	4th	MEASUREMENT OF RESISTANCE, INDUCTANCE& CAPACITANCE	Construction and principles of Multimeter. (Analog and Digital)
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to equipment
8TH	1st	MEASUREMENT OF RESISTANCE, INDUCTANCE& CAPACITANCE	Measurement of inductance by Maxewell's Bridge method.
	2nd		
	3rd		Measurement of capacitance by Schering Bridge method
	4th		
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to resistance measurement
9TH	1st	SENSORS AND TRANSDUCER	Define Transducer, sensing element or detector element and transduction elements.
	2nd	SENSORS AND TRANSDUCER	
	3rd	SENSORS AND TRANSDUCER	Classify transducer. Give examples of various class of transducer
	4th	SENSORS AND TRANSDUCER	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to sensors
10TH	1st	SENSORS AND TRANSDUCER	Resistive transducer
	2nd	SENSORS AND TRANSDUCER	Linear and angular motion potentiometer
	3rd	SENSORS AND TRANSDUCER	Thermistor and Resistance thermometers
	4th	SENSORS AND TRANSDUCER	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basic instrument
11TH	1st	SENSORS AND TRANSDUCER	Wire Resistance Strain Gauges
	2nd	SENSORS AND TRANSDUCER	
	3rd	SENSORS AND TRANSDUCER	. Inductive Transducer & Principle of linear variable differential Transformer (LVDT)
	4th	SENSORS AND TRANSDUCER	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basic instrument
12TH	1st	SENSORS AND TRANSDUCER	Uses of LVDT.
	2nd	SENSORS AND TRANSDUCER	
	3rd	SENSORS AND TRANSDUCER	Capacitive Transducer.& General principle of capacitive transducer
	4th	SENSORS AND TRANSDUCER	Variable area capacitive transducer
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basic instrument
13TH	1st	SENSORS AND TRANSDUCER	. Change in distance between plate capacitive
	2nd	SENSORS AND TRANSDUCER	
	3rd	SENSORS AND TRANSDUCER	Piezo electric Transducer and Hall Effect Transducer with their applications
	4th	SENSORS AND TRANSDUCER	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to Basic instrument
14TH	1st	OSCILLOSCOPE	Principle of operation of Cathode Ray Tube
	2nd	OSCILLOSCOPE	
	3rd	OSCILLOSCOPE	. Principle of operation of Oscilloscope (with help of block diagram.
	4th	OSCILLOSCOPE	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to instrument

15TH	1st	OSCILLOSCOPE	Measurement of DC Voltage & current
	2nd	OSCILLOSCOPE	
	3rd	OSCILLOSCOPE	Measurement of AC Voltage, current, phase & frequency
	4th	OSCILLOSCOPE	
	5th	TUTORIAL CUM DOUBT CLEAR CLASS	Objective Questions related to instrument

The lesson plan prepared by the concerned faculty.

UMESH CHANDRA SETHI

PTGF .Of Elect. Engg. Deptt.