

PSIET, KARANDA, DHENKANAL

LESSON PLAN

Session(2022-2023)

Discipline:Electrical Engg.	Semester: 4th,Summer/2023	NameoftheTeachingFaculty: Truptimayee Sahu, Lecturer
Subject:Electrical Measurement &Instrumentation ,Theory-3	No. of Days/Week:05	Start Date: 15/02/2023 End Date: 23/05/2023

Week	ClassDay	TheoryTopics
1st	1st	DefineAccuracy,Precision,Errors,Resolution, Sensitivity,Tolerance.
	2nd	ClassificationsofmeasuringInstruments,Deflecting arrangements ofindicatingtypes of instruments
	3rd	Controllingarrangementsofindicatingtypeofinstruments, Springcontrol,Gravitycontrol
	4th	Dampingarrangementsofindicatingtypeofinstruments
	5th	Calibrationofinstruments
2nd	1st	ConstructionandprincipleofoperationofPMMCinstruments
	2nd	ConstructionandprincipleofoperationofPMMCinstruments
	3rd	ConstructionandprincipleofoperationofMltype instruments(Attraction type)
	4th	ConstructionandprincipleofoperationofMltype instruments (Repulsion type)
	5th	RectifiertypelInstruments
3rd	1st	<i>DoubtClearingclass</i>
	2nd	Dynamometertypewattmeter,errorsandcorrection.
	3rd	<i>AssignmentEvaluation &Class Test</i>
	4th	PrinciplesofDynamometertypeofinstruments
	5th	Dynamometertypewattmeter
	1st	Dynamometertypewattmeter,errorsandcorrection

4th	2nd	Dynamometertypewattmeter, errorsandcorrection
	3rd	<i>DoubtClearingclass</i>
	4th	<i>AssignmentEvaluation &Class Test</i>
	5th	<i>QUIZTest-1</i>
5th	1st	PrinciplesofInductiontypeofinstrument
	2nd	Inductiontypewattmeter
	3rd	Inductiontypewattmeter errorsandcorrection
	4th	LPFtypeWatt meter/UPFtypewattmeter
	5th	Inductiontypewatt meter
6th	1st	Errors&compensation
	2nd	Extensionofrangeofinstrumentsbyshunts
		Extensionofrangeofinstrumentsbymultipliers
	3rd	ConstructionandprincipleofoperationofEnergymeter.
	4th	Errorsofenergymeter, compension, adjustments
	5th	Testingofenergymeter.
7th	1st	Testing ofenergymeter.
	2nd	ElectricalResonancetypefrequencymeter
	3rd	Singlephasepowerfactormeter
	4th	Threephasepowerfactormeter
	5th	MechanicalResonancetypefrequency meter
8th	1st	<i>AssignmentEvaluation &Class Test</i>
	2nd	ElectricalResonancetypefrequencymeter
	3rd	Singlephasepowerfactormeter
	4th	Threephasepowerfactormeter
	5th	Classificationofresistance, Differentmethodsusedfor measurement of resistance.
9th	1st	<i>QUIZTest-2</i>
	2nd	Measurementoflowresistancebypotentialmetermethod.
	3rd	Lossofchargemethod
	4th	ConstructionandworkingprinciplesofMegger
	5th	ConstructionandworkingprinciplesofEarthtester
	1st	MeasurementofinductancebyMaxwell'sbridgemethod.

10th	2nd	Measurement of inductance by Anderson bridge method
	3rd	Measurement of inductance by Owens bridge method.
	4th	Measurement of capacitance by Shearing bridge method
	5th	Measurement of capacitance by Shearing bridge method
11th	1st	Define Transducer, sensing element, transduction element
	2nd	classification of Transducer,
	3rd	Resistive transducer, linear potentiometer
	4th	Angular potentiometer
	5th	Resistance thermometer
12th	1st	Thermistor
	2nd	Linear variable differential transformer
	3rd	General principle of Capacitive Transducer.
	4th	<i>Assignment Evaluation & Class Test</i>
	5th	Variable area capacitive Transducer
13th	1st	Wire resistance strain gauge
	2nd	Piezoelectric Transducer
	3rd	Hall Effect Transducer.
	4th	<i>Assignment Evaluation & Class Test</i>
	5th	Principle of operation of CRT
14th	1st	Principle of CRO
	2nd	Measurement of DC voltage
	3rd	Measurement of DC current
	4th	Measurement of A.C voltage and current
	5th	Measurement of AC voltage, current and frequency.
15th	1st	<i>Assignment Evaluation & Class Test</i>
	2nd	<i>Discussion of Previous year questions</i>
	3rd	<i>Discussion of Previous year questions</i>
	4th	<i>Discussion of Previous year questions</i>
	5th	<i>Discussion of Previous year questions</i>

Reetmayee Sahu,
Signature of the faculty

[Signature]
15/12/23
Signature of the Principal