
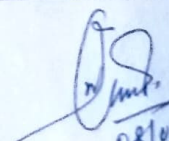


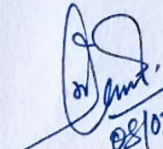
DISCIPLINE (ELECTRICAL ENGG.)	SEMESTER – 4t Sem (2022-2023)	NAME OF THE FACULTY- Er:Sunil Badotra
SUBJECT:- ELECTRICAL MEASUREMENT & INSTRUMENTATION	NO OF CLASS/WEEKS Allotted:5	SEMESTER FROM-14.02.2023 to 25.05.2023 No of weeks:15
WEEKS – 15	CLASS/DAY	Theory
14.02.2023 to 18.02.2023	1st	MEASURING INSTRUMENTS
	2nd	Define Accuracy, precision, Errors, Resolutions Sensitivity and tolerance.
	3rd	Classification of measuring instruments.
	4th	Explain Deflecting, controlling and damping arrangements in indicating type of instruments.
		Calibration of instruments.
20.02.2023 to 25.02.2023	1st	ANALOG AMMETERS AND VOLTMETERS
	2nd	Describe Construction, principle of operation, errors, ranges merits and demerits
	3rd	Moving Iron type instruments.
	4th	Permanent Magnet Moving coil type instruments.
	5th	Dynamometer type instruments
27.02.2023 to 04.03.2023	1st	Rectifier type instruments
	2nd	Induction type instruments
	3rd	Extend the range of instruments by use of shunts and Multipliers.
	4th	Solve Numerical
	5th	WATTMETERS AND MEASUREMENT OF POWER
06.03.2023 to 11.03.2023	1st	Describe Construction, principle of working of Dynamometer type wattmeter. (LPF and UPF type)
	2nd	DOLO PURNIMA
	3rd	HOLI
	4th	The Errors in Dynamometer type wattmeter and methods of their correction.
	5th	Discuss Induction type watt meters. ENERGYMETERS AND MEASUREMENT OF ENERGY
13.03.2023 to 18.03.2023	1st	Introduction:Single Phase Induction type Energy meters – construction, working principle and their compensation & adjustments.
	2nd	Testing of Energy Meters.
	3rd	MEASUREMENT OF SPEED, FREQUENCY AND POWER FACTOR
	4th	Tachometers, types and working principles
	5th	Principle of operation and construction of Mechanical and Electrical resonance Type frequency meters.
20.03.2023 to	1st	Principle of operation and working of Dynamometer type single phase and three phase power factor meters.
	2nd	MEASUREMENT OF RESISTANCE, INDUCTANCE& CAPACITANCE


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25.03.2023	3rd	Classification of resistance
	4th	Measurement of low resistance by potentiometer method. .
	5th	Measurement of medium resistance by wheat Stone bridge method.
27.03.2023 to 01.04.2023	1st	Measurement of medium resistance by wheat Stone bridge method.
	2nd	Measurement of high resistance by loss of charge method.
	3rd	Measurement of high resistance by loss of charge method.
	4th	RAMA NAVAMI
	5 th	Construction, principle of operations of Megger & Earth tester for insulation resistance and earth resistance measurement respectively. Construction, principle of operations of Megger & Earth tester for insulation resistance and earth resistance measurement respectively.
03.04.2023 to 08.04.2023	1st	Construction and principles of Multimeter. (Analog and Digital)
	2nd	Construction and principles of Multimeter. (Analog and Digital)
	3rd	Measurement of inductance by Maxwell's Bridge method.
	4th	Measurement of capacitance by Schering Bridge method
	5th	GOOD FRIDAY
10.04.2023 to 15.04.2023	1st	SENSORS AND TRANSDUCER
	2nd	SENSORS AND TRANSDUCER
	3rd	Define Transducer, sensing element or detector element and transduction Elements
	4th	Define Transducer, sensing element or detector element and transduction Elements
	5th	MAHA SVISUBA SANKRANTI
17.04.2023 to 22.04.2023	1st	Classify transducer. Give examples of various class of transducer.
	2nd	Resistive transducer
	3rd	Linear and angular motion potentiometer.
	4th	Thermistor and Resistance thermometers.
	5th	Thermistor and Resistance thermometers.
24.04.2023 to 29.04.2023	1st	Wire Resistance Strain Gauges
	2nd	Wire Resistance Strain Gauges
	3rd	Inductive Transducer
	4th	Inductive Transducer
	5th	Principle of linear variable differential Transformer (LVDT)
01.05.2023 to 06.05.2023	1st	Principle of linear variable differential Transformer (LVDT)
	2nd	Uses of LVDT.
	3rd	Capacitive Transducer.
	4th	General principle of capacitive transducer.
	5th	BUDDHA PURNIMA
08.05.2023 to 13.05.2023	1st	General principle of capacitive transducer.
	2nd	Variable area capacitive transducer
	3rd	Change in distance between plate capacitive transducer.
	4 th	Piezo electric Transducer and Hall Effect Transducer with their applications.
	5 th	Piezo electric Transducer and Hall Effect Transducer with their applications.
15.05.2023 to	1st	OSCILLOSCOPE
	2nd	OSCILLOSCOPE
	3 rd	Principle of operation of Cathode Ray Tube.


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20.05.2023	4 th	Principle of operation of Cathode Ray Tube.
	5 th	SABITRI AMABASYA
22.05.2023 To 25.05.2023	1 st	Principle of operation of Oscilloscope (with help of block diagram).
	2 nd	Principle of operation of Oscilloscope (with help of block diagram).
	3 rd	Measurement of DC Voltage & current.
	4 th	Measurement of AC Voltage, current, phase & frequency.


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