

PADMASHREE KRUTARTHA ACHARYA INSTITUTE OF ENGINEERING & TECHNOLOGY, BARGARH



LESSON PLAN Session-2023-2024

Discipline: EMG Engg. Semester: 4th

Subject: Electrical Measurement & Instrumentation.

Name of the Teaching Faculty: Dharmendra Kumar Dash

Subject: EM9 No. of Days/per week class allotted : _____

Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : _____

Week	Class Day	Theory /Practical Topics
	1	Definition of electrical instruments and its classification
	2	Various systems in an electrical instrument and their functions
	3	Various torque & control systems and torque equations
	4	Sketch (figures) of instruments with labelling
	5	Tutorial.
	6	Types of instruments with construction, displaying and calibration.
	7	PMMC type instrument
	8	PMMC type ammeter and Voltmeter.
	9	Extension of measurements
	10	Tutorial.
	11	BMMD type instruments
	12	Errors in instruments and rectifications.

Dharmendra Kumar Dash

Signature of the Faculty

Subject: EMG No. of Days/per week class allotted : _____

Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : _____

Week	Class Day	Theory /Practical Topics
	13	Advantages and disadvantages of instruments
	14	Mathematical problems based on instrument's equation.
	15	Tutorial.
	16	EMMC type instruments
	17	EMMC type Wattmeter
	18	Errors in EMMC type instruments and rectifications
	19	Advantages and disadvantages of EMMC type instruments
	20	Tutorial
	21	Energymeter (definition)
	22	Induction type energymeter
	23	Advantages and disadvantages of energymeter
	24	Errors and rectifications, Creeping & Compensations.

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Subject: RMG No. of Days/per week class allotted :

Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks :

Week	Class Day	Theory /Practical Topics
	25	Tutorial
	26	Testing of energymeter and types of testing
	27	Tachometers
	28	Types of tachometers (detail study)
	29	Frequencymeters
	30	Tutorial.
	31	Types of frequencymeters
	32	Reed type frequencymeter
	33	Electric resonance type. frequencymeter
	34	Working principle and mathematical expression of frequency meter
	35	Tutorial.
	36	Definition of Powerfactor

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Subject: RMG No. of Days/per week class allotted : _____

Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : _____

Week	Class Day	Theory / Practical Topics
	37	Types of powerfactor meter
	38	1- ϕ moving coil type powerfactor meter
	39	3- ϕ powerfactor meter and its connection
	40	Tutorial
	41	Classification of resistances
	42	Methods of measurement- of resistances
	43	Methods of measurement- of low resistances
	44	Potentiometer
	45	Wheatstone Bridge
	46	Tutorial
	47	Loss of charge method for measurement- of high resistance.
	48	Megger

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Semester From Date : 16-01-2024 To Date : 26-04-2024 No. of Weeks : _____

Week	Class Day	Theory /Practical Topics
	49	Earth Tester
	50	Measurement of insulation resistance of a cable by megger
	51	Measurement earth resistance
	52	Tutorial
	53	Multimeters and types
	54	Analog and digital multimeter
	55	Measurement of inductance by AC bridge (Maxwell bridge)
	56	Measurement of Capacitance by Schering bridge.
	57	Tutorial
	58	Definition of transducer and sensing elements or detector elements or transduction elements
	59	Classification of transducers
	60	Resistive transducer

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Subject: _____

R.M.G

No. of Days/per week class allotted : _____

Semester From Date : 16-01-2024To Date : 26-04-2024

No. of Weeks : _____

Week	Class Day	Theory / Practical Topics
	61	Linear and angular motion potentiometers
	62	Thermistors and resistance thermometer
	63	Tutorial
	64	Strain Gauges
	65	Inductive transducer
	66	Study of LVDT
	67	Uses of LVDT
	68	Tutorial
	69	Capacitive transducer
	70	General principle of Capacitive transducer
	71	Variable area Capacitive transducer
	72	Plate Capacitive transducer

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