

LESSON PLAN

Degree/Diploma/+2 Science
(Theory/Pract/Lab/Workshop)

Semester 4th Branch Electrical Engg

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
13.2.2023	TH-3 EM & I	<u>Measuring instruments</u> Definition of Accuracy, precision, errors, resolution, sensitivity and tolerance. Classification of measuring instruments.	1
14.2	"	Different torques, deflecting, controlling, and different damping arrangements.	1
15.2	"	Calibration of instruments.	1
20.2	"	Analogue Ammeters and voltmeters Moving coil type instruments, construction, operating principle, errors, ranges, merits & demerits.	1
21.2	"	PMMC instruments, construction, operating principle, errors, ranges, merits & demerits.	1
22.2	"	Dynamometer type instruments	1
27.2	"	Rectifier type instruments	1
28.2	"	Shunt and multipliers	1
1.3	"	<u>wattmeter and measurement of power</u> Dynamometer type wattmeters, construction, principle of working	
6.3	"	LPF type dynamometers UPF type dynamometers	
7.3	"	Errors in dynamometer type wattmeters & their correction.	
8.3	"	Induction type wattmeters, construction principle of operation.	
13.3	"	Energy meter & measurement of energy Induction & induction type energy meters, construction, working principle	
14.3	"	compensation, adjustments	
15.3	"	Testing of energy meters	

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Semester 4th Branch Electrical Engg

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/Signature of HOD/Directr
13.2.23	TH-3 EM & I	34	<u>Measuring instruments</u> Definition of Accuracy, precision, errors, resolution, sensitivity and tolerance. Classification of measuring instruments.		
14.2	"	34	Different torques, deflecting, controlling and different damping arrangements.		
15.2	"	34	calibration of instruments		
20.2	"	34	Analogue Ammeter & Voltmeter's MC type instruments, construction, operating principle, errors, ranges, merits & demerits.		
21.2	"	34	PMMC instruments, construction, operating principle, errors, ranges, merits & demerits.		
22.2	"	34	Dynamometer type instruments		
27.2	"	34	Rectifier type instruments		
28.2	"	34	shunt and multipliers.		
1.3	"	34	<u>wattmeter and measurement of power</u> Dynamometer type wattmeters, construction, principle of operation.		
6.3	"	34	LPF type dynamometers UPF type dynamometers.		
7.3	"	34	Errors in dynamometer type wattmeters & their correction.		
8.3	"	34	Induction type wattmeters, construction, principle of operation.		
13.3	"	34	Energy meter & measurement of energy Induction & induction type energy meters, construction, working principle.		
14.3	"	34	compensation, adjustments		
15.3	"	34	Testing of energy meters.		

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Degree/Diploma/+2 Science
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Semester 1st Branch Electrical Engg

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
20.3.2023	TH-3 EM&I	Measurement of speed, frequency and power factor Tachometers, construction, working principle, types.	
21.3	"	Frequency meters, construction, working principle.	
22.3	"	Dynamometer type 1- Φ P.F. meters.	
27.3	"	Dynamometer type 2- Φ power factor meters, construction, working principle.	
28.3	"	Measurement of Resistance, inductance and capacitance Classification of Resistance, Measurement of low resistance by potentiometer method.	
29.3	"	Ammeter - voltmeter method.	
3.4	"	Kelvin double bridge method.	
4.4	"	Measurement of medium resistance by Wheatstone bridge method.	
5.4	"	Measurement of high resistance by loss and charge method.	
10.4	"	Megger: construction, operating principle, earth tester.	
11.4	"	Multimeter, construction, operating principle, Analog and digital type multimeters.	
12.4	"	Measurement of conductance by Maxwell's bridge method.	
17.4	"	Measurement of capacitance by Schering bridge method.	
18.4	"	Sensors and Transducers Definition, sensing element, detector element and transduction element.	
19.4	"	Classification of Transducers, examples of various class of transducers.	

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Degree/Diploma/+2 Science
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Semester 1st Branch Electrical Engg

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Teacher
20.3.23	TH-3 EM&I	34	Measurement of Speed, frequency and P.F. Tachometers, construction, working principle, types.		
21.3	"	34	Frequency meters, construction, working principle.		
22.3	"	34	Dynamometer type 1- Φ P.F. meters.		
27.3	"	34	Dynamometer type 2- Φ P.F. meters, construction, working principle.		
28.3	"	33	Measurement of Resistance, inductance and capacitance Classification of resistance, measurement of low resistance by potentiometer method.		
29.3	"	29	Ammeter - voltmeter method.		
3.4	"	33	Kelvin double bridge method.		
4.4	"	32	Measurement of medium resistance by Wheatstone bridge method.		
5.4	"	32	Measurement of high resistance by loss and charge method.		
10.4	"	34	Megger: construction, operating principle, Earth tester.		
11.4	"	31	Multimeter: construction, operating principle, Analog & digital type multimeters.		
12.4	"	33	Measurement of conductance by Maxwell's bridge method.		
17.4	"	31	Measurement of capacitance by Schering bridge method.		
18.4	"	33	Sensors and Transducers Definition, sensing element, detector element, transduction element.		
19.4	"	33	Classification of Transducers, various class of transducer.		

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Semester 4th Branch Electrical Engg

Month & Date	Course No. & Title	Brief note of the topics to be covered	No. of Classes Required
24.4.2023	TH-3 EM&I	Resistive transducers, linear and angular motion potentiometer.	1
25.4	"	Thermistors, Resistance thermistors	1
26.4	"	Resistance strain gauges.	1
1.5	"	Inductive transducers principle of LVDT, uses of LVDT	1
2.5	"	Capacitive transducers, operating principle.	1
3.5	"	Variable area Transducer	1
8.5	"	piezo electric transducer	1
9.5	"	Hall effect transducer	1
10.5	"	Oscilloscope Construction & principle of operation of CRT, Block diagram.	1
15.5	"	Measurement of DC voltage & current	1
16.5	"	Measurement of AC voltage and current	1
17.5	"	Phase and frequency.	1

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Semester 4th Branch Electrical Engg

Date	Course No. & Title	No. of Student Present	Mention the Topics covered	If not taken mention the reasons	Remarks/ Signature of HOD/Director
24.4.23	TH-3 EM&I	23	Resistive transducers, linear and angular motion potentiometer		
25.4	"	31	Thermistors, Resistance thermistors		
26.4	"	30	wire resistance strain gauges		
1.5	"	32	Inductive transducers principle of LVDT, uses of LVDT		
2.5	"	30	Capacitive transducers operating principle		
3.5	"	29	Variable area Transducer		
8.5	"	32	piezo electric transducer		
9.5	"	31	Hall effect transducer		
10.5	"	31	Oscilloscope Construction principle of operation of CRT, Block diagram		
15.5	"	32	Measurement of DC Voltage & current.		
16.5	"	26	Measurement of AC voltage and current		
17.5	"	31	Phase and frequency.		