

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

SIVARAM VIHAR, GHATAKESWAR HILLS
MOHADA, BERHAMPUR (GM.)



STUDENT'S ATTENDANCE REGISTER

	Time	9:05	12:25			
	Day	-9:55	-1:15			
	TUE	EMD				
	WED		EMD			
	THU	EMD				
	FRI	EMD				
	SAT	EMD				

Year/ Session	2 nd year / 2022 - 2023
Semester & Branch	4 th sem Electrical
Subject with Code	EMD (Electrical measurement & Instrumentation) Th-3
Name of the Faculty Member	Pooja Padihi

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic	
FEB	3rd	14/02/23	1. <u>Measuring Instruments</u> :- 1.1 Define accuracy, precision, errors, resolution sensitivity and tolerance.	
		15/02/23	1.2 Classification of measuring instruments.	
		16/02/23 17/02/23	1.3 Explain Deflecting, controlling and damping arrangements in indicating type of instruments.	
		21/02/23	1.4 Calibration of instruments.	
	4th		22/02/23	2. <u>Analog Ammeters and Voltmeters</u> :- 2.1 Describe principle of operations, construction, errors, ranges merits and demerits of:
			22/02/23	2.1.1. Moving Iron type instruments
			23/02/23 24/02/23	2.1.2 Permanent Magnet Moving coil type instruments.
			25/02/23	2.1.3 Dynamometer type instruments.
			28/02/23	2.1.4 Rectifier type instruments.
			01/03/23	2.1.5 Induction type instruments.
MAR	1st	02/03/23	2.2 Extend the range of instruments by use of shunts & multipliers.	
	2nd	09/03/23		

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M	2 nd	10/03/23	2.3. Solve Numerical 3. <u>Wattmeters and measurement of power</u> :-
A	3 rd	11/03/23	3.1 Describe construction, principle of working of Dynamometer type wattmeter. (LPF & UPF)
		14/03/23	
		15/03/23	
R	3 rd	16/03/23	3.2 The errors in Dynamometer type wattmeter and methods of their correction.
		17/03/23	
		18/03/23	
C	4 th	21/03/23	3.3 Discuss Induction type watt meters. 4. <u>Energymeters & measurement of energy</u> :-
		22/03/23	
		23/03/23	
H	5 th	24/03/23	4.1 Introduction 4.2 Single phase Induction type energy meters - construction, working principle & their compensation & adjustments.
		25/03/23	
		28/03/23	
		29/03/23	4.3 Testing of energy meters
		31/03/23	
04/04/23			
05/04/23			

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
A	2 nd	6/04/23 8/04/23	5. <u>Measurement of speed, frequency & power factor :-</u> 5.1 Tachometers, types & working principles.
P	3 rd	11/04/23 12/04/23 13/04/23	5.2 Principle of operation & construction of Mechanical & electrical resonance type frequency meters.
R		15/04/23 18/04/23	5.3 Principle of operation & working of Dynamometer type single phase & three phase power factor meters.
I	4 th	19/04/23	6. <u>Measurement of Resistance, inductance & capacitance :-</u> 6.1 Classification of resistance
L		20/04/23	6.1.1 Measurement of low resistance by potentiometer method.
		21/04/23	6.1.2 Measurement of medium resistance by wheat stone bridge method.
		25/04/23 26/04/23	6.1.3 Measurement of high resistance by loss of charge method. 6.2 Construction, principle of operations of Megger & earth

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16.2.23

B.I.E.T., COURSE PLAN

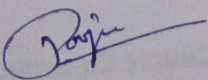
Month	Week	Class Day	Theory/Practical Topic
APR	5 th		tester for insulation resistance & earth resistance measurement respectively.
		27/04/23	6.3 Construction & principle of multimeters! (Analog & Digital)
		28/04/23	6.4 Measurement of Inductance by Maxwell's Bridge method.
		29/04/23	6.5 Measurement of capacitance by Schering Bridge method.
MAY	1 st		<u>7. Sensors & transducers! -</u>
		2/05/23	7.1 Define transducer, sensing element or detector element & transduction elements.
		3/05/23	7.2 Classify transducer. Give examples of various class of transducer.
			7.3 Resistive transducer.
04/05/23	7.3.1 Linear & angular potentiometer.		
	7.3.2 Thermistors & Resistance Thermometers.		
		04/05/23	7.3.3 Wire resistance strain gauge
			7.4 Inductive transducer. <i>gms</i>

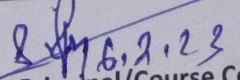
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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
M A Y	1st	06/05/23	7.4.1 Principle of linear variable differential transformer (LVDT).
		09/05/23	7.4.2 Uses of LVDT. 7.5 Capacitive Transducer.
	2nd	10/05/23	7.5.1 General principle of capacitive transducer.
		11/05/23	7.5.2 Variable area capacitive transducer.
		12/05/23	7.5.3 Change in distance between plate capacitive transducer.
		13/05/23	7.6 Piezo electric Transducer & Hall effect Transducer with their applications.
		16/05/23	8. Oscilloscope :- 8.1 Principle of operation of cathode Ray Tube.
		17/05/23	8.2 Principle of operation of oscilloscope (with the help of block diagram)
	3rd	18/05/23	8.3 measurement of DC voltage & current.
		20/05/23	
4th	23/05/23	8.4 measurement of AC voltage, current, phase & frequency.	

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