BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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

STUDENT'S ATTENDANCE REGISTER

Time / Day	9:05 – 9:55	12:25 – 1:15			
TUE	EMI				
WED		EMI			
THU	EMI				
FRI	EMI				
SAT	EMI				

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

B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			1. Measuring Instruments :-
FEB	3rd	14/02/23	1.1 Define accuracy, precision, errors, resolution, sensitivity and tolerance.
		15/02/23	1.2 Classification of measuring instruments.
		16/02/23	1.3 Explain Deflecting, controlling
		17/02/23	and damping arrangements in indicating type of instruments.
		21/02/23	1.4 Callibration of instruments.
			2. Analog Ammeters and Voltmeters :-
	4th	22/02/23	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	2.1.2 Permanent Magnet Moving coil
		24/02/23	type instruments.
		25/02/23	2.1.3 Dynamometer type instruments.
	5th	28/02/23	2.1.4 Rectifier type instruments.
MAR	1st	01/03/23	2.1.5 Induction type instruments.
		02/03/23	
		04/03/23	2.2 Extend the range of instruments
	2nd	09/03/23	by use of shunts & multipliers.

Signature of the Faculty: Ravi 16/2/23

Signature of the Principal/Course Co-ordinator/HOD: 16/2/23

B.I.E.T., COURSE PLAN

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

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16/2/23

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B.I.E.T., COURSE PLAN

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

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16.2.23

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
			Tester for insulation resistance & earth resistance measurement respectively.
APR	5th	27/04/23	6.3 Construction & principle of multimeters: (Analog & Digital)
		28/04/23	6.4 Measurement of Inductance by Maxwells Bridge method.
		29/04/23	6.5 Measurement of capacitance by schering Bridge method.
			7. Sensors & transducers:-
MAY	1st	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.
			7.3.1 Linear & angular potentiometer.
			7.3.2 Thermistors & Resistance Thermometers.
		04/05/23	7.3.3 Wire resistance strain gauges
			7.4 Inductive transducer.

Signature of the Faculty: Ranjit

16.02.23

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B.I.E.T., COURSE PLAN

Month	Week	Class Day	Theory/Practical Topic
	1st	06/05/23	7.4.1 Principle of linear variable differential transformer (LVDT).
M		09/05/23	7.4.2 Uses of LVDT. 7.5 Capacitive Transducer.
		10/05/23	7.5.1 General principle of capacitive transducer.
	2nd	11/05/23	7.5.2 Variable area capacitive transducer.
		12/05/23	7.5.3 Change in distance between plate capacitive transducer.
A		13/05/23	7.6 Piezo electric Transducer & Hall effect Transducer with their applications.
			8. Oscilloscope :-
		16/05/23	8.1 Principle of operation of cathode Ray Tube.
Y	3rd	17/05/23	8.2 Principle of operation of oscilloscope (with the help of block diagram)
		19/05/23 20/05/23	8.3 Measurement of DC voltage & current.
	4th	23/05/23	8.4 Measurement of voltage, current, phase & frequency.

Signature of the Faculty: Roja

Signature of the Principal/Course Co-ordinator/HOD: