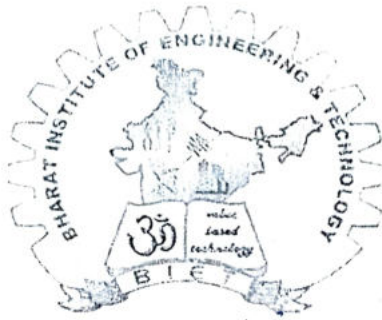


3rd Sem ETC

BHARAT INSTITUTE OF ENGINEERING & TECHNOLOGY

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











STUDENT'S ATTENDANCE REGISTER

Time	9:55	11:35	12:25		
Day	10:45	12:25	1:15		
MON		✓			
TUE			✓		
FRI		✓			
SAT	✓				









Year/ Session	2nd year 2021-22
Semester & Branch	3rd Sem. ETC Branch.
Subject with Code	TH-4, EM2I
Name of the Faculty Member	En. Suchismita Gouda.

B.I.E.T.












SYLLABUS COVERAGE

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
-: <u>UNIT-1</u> :-			
<p>∴ <u>Qualities of Measurement</u> :-</p> <p>1.1. Discuss the static characteristics.</p> <p>1.2. Accuracy, Sensitivity, Reproducibility & Static error of instruments.</p>	16/9/22		 12/9/22
<p>1.3. Dynamic characteristics & Speed of instruments.</p>	19/9/22		 12/9/22
<p>1.4. Errors of an instruments & explain various types.</p>	20/9/22		 12/9/22
		 Seen 12.9.22	 Upadhyay 12/9/22









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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
- <u>UNIT-02</u> -			
- <u>INDICATING INSTRUMENTS</u> :-			
2.1 Introduction to indicator & display devices & its types.	23/9/22		
2.2. Basic principle of meter movement, permanent magnet moving coil movement & its advantages & disadvantages.	24/9/22		
2.3 Operation of Moving Iron Instrument.	24/9/22		
2.4 Basic principle of operation of MC Ammeter & multi range Ammeter.	22/9/22		

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SIGNATURE OF H.O.D.	TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
29/9/22	2.5. Basic principle of operation of AC Ammeter & Multi range Ammeter.	27/9/22.		 12/9/22
29/9/22	2.6 Basic principle of operation of DC voltmeter and its application.	30/9/22		 12/9/22
29/9/22	2.7 Basic principle of operation of AC voltmeter and its application.			
29/9/22	2.8 Basic principle of ohm meter. (Series & shunt type)	1/10/22.		 14/9/22
29/9/22	2.9 Basic principle of Analog multimeter, its types & applications.	14/10/22		 12/9/22
29/9/22	2.10 Operation of Q-meter and its essentials.	15/10/22.		 12/9/22  12/9/22

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
- <u>UNIT-03</u> :-			
<p>→ <u>DIGITAL INSTRUMENTS</u> :-</p>			
3.1 Principle of operation of Ramp type Digital voltmeter & applications.	17/10/22		 12/9/22
3.2. Operation of displayed of $3\frac{1}{2}$, $4\frac{1}{2}$ - Digital Multimeter & Resolution and Sensitivity.	18/10/22.		 25/9/22
3.3 Basic principles of working of Digital Multimeter and its types & application.	21/10/22		 12/9/22
3.4. Basic principles of operation of working of Digital frequency meter.	22/10/22		 12/9/22

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SIGNATURE OF THE H.O.D.

Prashant
12/9/22











Prashant
12/9/22

Prashant
12/9/22

Prashant
12/9/22

TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
3.5 Operation of working of Digital measurement of time.	25/10/22.	<i>[Signature]</i>	<i>Prashant</i> 12/9/22
3.6 Measurement of frequency.	28/10/22	<i>[Signature]</i>	<i>Prashant</i> 12/9/22
3.7 Principle of operation of working of Digital Tachometer.		<i>[Signature]</i>	<i>Prashant</i> 12/9/22
3.8 Principle of operation of working of Automation in Digital instruments. (Polarity indication, Ranging, zeroing and fully Automatic)	29/10/22	<i>[Signature]</i>	<i>Prashant</i> 12/9/22
3.9 Block diagram of LCR meter and its working principle.	31/10/22.	<i>[Signature]</i>	<i>Prashant</i> 12/9/22

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
— <u>UNIT: -04</u> —			
— <u>OSCILLOSCOPE</u> —			
4.1 Basic Principle of Oscilloscope & its Block diagram.	11/11/22.		 14/9/22
			5.1 5.2
4.2. Basic principle & block diagram of CRO, Dual trace oscilloscope & its specifications.	4/11/22. 5/11/22.		 12/9/22
			5.3
4.3 CRO Measurements, Lissajous figures,	7/11/22.		 12/9/22
			5.4
4.4. Application of oscilloscope. (Voltage period & frequency measurement)	11/11/22.		 14/9/22
			5.5
4.5. Operation of Digital Storage Oscilloscope & High frequency oscilloscope.	12/11/22.		 12/9/22
			5.6 5.7

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
- UNIT - 05 - - BRIDGES -			
5.1 Types of Bridges (MC & AC bridge)	14/11/22	Hoop	Prasanna 12/9/22
5.2 MC Bridges (Measurement of Resistance by Wheatstone's bridge)	15/11/22	Hoop	Prasanna 12/9/22
5.3 AC bridges (Measurement of inductance by Maxwell's bridge & by Hay's bridge)	18/11/22	Hoop	Prasanna 12/9/22
	19/11/22	Hoop	
5.4 Measurement of capacity by Schering's bridge & DeSauty bridge.	21/11/22	Hoop	Prasanna 12/9/22
	22/11/22	Hoop	
5.5 Working Principle of Q-meter its circuit diagram & measurement of low impedance.	25/11/22	Hoop	Prasanna 12/9/22
5.6 Measurement of frequency.	26/11/22	Hoop	Prasanna 12/9/22
5.7 LCR meter & its measurements.	29/11/22	Hoop	Prasanna 12/9/22
			Upadhyay 12/9/22

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
- ! <u>UNIT :- 06</u> ! -			
* <u>Transducers & Sensor</u> :-			
6.1 Parameter, Method of selecting & advantage of electrical transducer & resistive transducer.	29/11/22		 7.1
6.2 Working principle of strain gauges, define strain gauge (No mathematical derivation)	2/12/22		 7.2
6.3 Working Principle of LVDT.	3/12/22		 7.3
6.4 Working principle of capacitive transducer (Pressure)	6/12/22		 7.4
6.5 Working principle of Load cell (Pressure cell)	6/12/22		 7.5
6.6 Working principle of temperature transducer (RTD, optical pyrometer, Thermocouple)	7/12/22		 7.6
6.7 Working Principle of current transducer and kW transducer.	12/12/22		 7.7
6.8 Working Principle of Proximity & light sensor.	13/12/22		 7.8

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TOPIC	DATE	SIGNATURE OF THE FACULTY	SIGNATURE OF THE H.O.D.
<u>UNIT :- 07 :-</u>			
-) <u>Signal Generator, Wave Analyser & MAS</u>			
7.1 General aspect & classification of signal generators.	16/12/22	Hoop	Forashom 12/9/22
7.2 Working Principle of AF sine & square wave generator.	17/12/22	Hoop	Forashom 12/9/22
7.3 Working Principle of the function generator.	17/12/22 19/12/22	Hoop	Forashom 12/9/22
7.4 Function of basic wave analyser & spectrum analyser.	18/12/22 20/12/22	Hoop	Forashom 12/9/22
7.5. Basic concept of Data Acquisition system (MAS).		Hoop	Forashom 12/9/22
		Seen 18/11/22	Upadhyay 12/9/22