

**PNS SCHOOL OF ENGINEERING AND TECHNOLOGY**

**LESSON PLAN**

<b>Branch-ETC ENGINEERING</b>	<b>Semester-3rd</b>	<b>Name of the Teaching faculty: ER.AMARENDRA SAHOO</b>	
Subject- ELECTRONICS MEASUREMENT &	No of days per week Class Alloted-0 5		SEMESTER-FROM DATE-01.08.23-30.11.23
Week		UNIT	
1st Week	1ST	UNIT-1 QUALITIES OF MEASUREMENT	<b>UNIT-1;Introduction of measurement and measuring</b>
	2ND		The static characteristics of measurement
	3RD		Accuracy ,sensitivity,reproducibility
	4TH		INSIDE QUESTION
	5TH		Static error of instrument
2nd Week	1ST	UNIT 2- Introduction to Indicator & Display devices & its type	Dynamic characteristics & its type
	2ND		Revision of chapter -1
	3RD		<b>UNIT 2-Introduction to Indicator &amp; Display devices &amp;</b>
	4TH		Basic principles of meter movement
	5TH		Permanent magnetic moving coil instrument
3rd Week	1ST	UNIT 2- Introduction to Indicator & Display devices & its type	Advantages of PMMC & Disadvantages of PMMC
	2ND		Operation of Moving Iron Instrument
	3RD		Revision /class test
	4TH		Basic principle of operation of DC Ammeter
	5TH		Multi range DC Ammeter
4th Week	1ST	UNIT 2- Introduction to Indicator & Display devices & its type	Basic principle of AC Ammeter
	2ND		Multi range DC Ammeter
	3RD		Basic principle of operation of AC Ammeter
	4TH		multi range AC Ammeter
	5TH		multi range AC Ammeter
6th Week.	1ST	UNIT 2- Introduction to Indicator & Display devices & its type	Application of DC volt meter
	2ND		Basic principle of operation of AC volt meter
	3RD		Application of AC volt meter
	4TH		Basic principle of OHM meter series type
	5TH		Basic principle of OHM meter shunt type
7th Week	1ST	UNIT 2- Introduction to Indicator & Display devices & its type	Basic principle of Analog Multimeter
	2ND		Types of Analog mulimeter & its type
	3RD		operation of Q meter & its requirement
	4TH		Revision/Assignment/class test
	5TH		<b>UNIT-3: DIGITAL INSTRUMENTS</b>
8th Week	1ST	UNIT-3: DIGITAL INSTRUMENTS	Applications RAMP type digital Volt Meter
	2ND		Operation of display 3 1/2,4 1/2 Digital Multimeter
	3RD		Basic principle of operation of working digital Frequency
	4TH		Operation of working of Digital Measurement of time
	5TH		Measurement of Frequency
9th Week	1ST	UNIT- 4:OSCILLOSCOPE	Principle of operation of working of Digital Tachometer
	2ND		Principle of operation of working of Automation in Digital
	3RD		Block diagram of LCR meter & its working principle
	4TH		Revision/Assignment/class test
	5TH		<b>UNIT-4:OSCILLOSCOPE</b>
	1ST	UNIT- 4:OSCILLOSCOPE	Dual trace oscilloscope & its specification
	2ND		Measurements by CRO,Lissajous figures
	3RD		Application of CRO(Voltage ,period &frequency
	4TH		Operation ofv Digital Storage Oscilloscope & high

10th Week	5TH		Revision/Assignment/class test
11th Week	1ST	UNIT-5: BRIDGES	<b>UNIT-5:BRIDGES</b>
	2ND		DC Bridges (wheatstone'S bridge)measurement of
	3RD		AC Bridges (Mearurement of inductance by maxwell's
	4TH		Hay's Bridge)
	5TH		measurement of capacitance by Schering'sbridge
12th Week	1ST	UNIT-6: TRANSDUCERS & SENSORS	DeSauty Bridge
	2ND		Working principle of Q meter its circuit diagram &
	3RD		measurements of frequency,LCR Meter & its
	4TH		Revision/Assignment/class test
	5TH		<b>UNIT-6: TRANSDUCERS &amp; SENSORS</b>
13th Week	1ST	UNIT-7: SIGNAL GENERATOR & WAVE ANALYSER	Working principle of Strain Gauges,defination of strain
	2ND		Working principle of LVDT
	3RD		Working principle of capacitive transducers-pressure
	4TH		Working principle of Tempreture Transducer-RTD
	5TH		Optical Pyrometer,thermocouple,Thermister
14th Week	1ST	UNIT-7: SIGNAL GENERATOR & WAVE ANALYSER	Working principle of current transducer and KW
	2ND		Revision/Assignment/class test
	3RD		<b>UNIT-7:SIGNAL GENERATOR &amp; WAVE ANALYSER</b>
	4TH		Working principle of AF sine
	5TH		Working principle of squre wave generator
14th Week	1ST	UNIT-7: SIGNAL GENERATOR & WAVE ANALYSER	Working principle of Function Generator
	2ND		function of basic Wave analyser
	3RD		function of basic Spectrum Analyser
	4TH		Basic concept of Data Acquisition System
	5TH		Revision/Assignment/class test
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