

**Name of the Faculty: Shivani**

**Discipline : Instrumentation and Control**

**Semester : 6th**

**Subject : Advanced Measurement Technique**

**Lesson Plan Duration : Jan-May 2025**

<b>Week</b>	<b>Day</b>	<b>Topic</b>
1	<b>1st</b>	Introduction of measurement system
	2nd	Functional elements of a measuring system
	3rd	Input – output configuration of instrumentation system
2	4th	Revision
	5th	Introduction of Measurement of (Length, Angle & Area)
	6th	Length Measuring Standard Instruments (Meter Rods, Scale, Tapes, Micrometer, Vernier Calliper)
3	7th	Length Measuring Standard Instruments ( Micrometer, Vernier Calliper)
	8th	Length Measuring Standard Instruments (Meter Rods, Scale, Tapes)
	9th	Angle Measuring Standard Instruments (Protector,Clinometers,Dial Bevel Protractor )
4	<b>10th</b>	Area Measuring Standard Instruments (Graphical Method Numerical Method)
	11th	Class Test
	12th	Introduction Measurement of Vibration (Velocity & Vibration)
5	13th	Linear Velocity Measurement by using (Electro Magnetic Transducer)
	14th	Linear Velocity Measurement by using (Seismic Transducer)
	15th	Linear Velocity Measurement by using (Doppler Transducer)
6	16th	Revision
	17th	Linear Velocity Measurement by using (Digital Transducer)
	18th	Tachogenerator ( Photo Electric, Tooth Rotor Variable Reluctance)
7	19th	Tachogenerator ( Tooth Rotor Variable Reluctance)
	<b>20th</b>	Stroboscope Methods
	21th	Revision

8	22th	Vibration Measurement by using Seismic Transducer (Potentiometric, LVDT, Strain Gauge Accelerometers)
	23th	Vibration Measurement by using Seismic Transducer (Potentiometric Accelerometers)
	24th	Vibration Measurement by using Seismic Transducer (LVDT Accelerometers)
9	25th	Vibration Measurement by using Seismic Transducer (Strain Gauge Accelerometers)
	26th	Revision
	27th	Introduction of Opto Electronic Measurement
10	28th	Photo sensitive devices – light emitting diodes
	29th	Photo sensitive devices – LDR
	30th	Photo sensitive devices – photo conductors
11	31th	Photo voltaic cell
	<b>32th</b>	Photo Thyristor
	33th	Photo transistors
12	34th	Opto-isolator
	35th	Light modulating techniques
	36th	Light modulating techniques – light suppression
13	37th	Light modulating techniques photo-metric
	38th	Measurement of density and specific gravity by using Force Balance Methods.
	39th	Measurement of density and specific gravity by using Gamma Rays, LVDT
14	40th	Measurement of density and specific gravity by using Hydrometer
	41th	Measurement of Ph.
	42th	Measurement of Viscosity by using falling sphere, falling piston
15	<b>43th</b>	Measurement of Viscosity by using rotating cylinder viscometer
	44th	Revision
	45th	Revision

