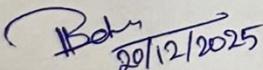
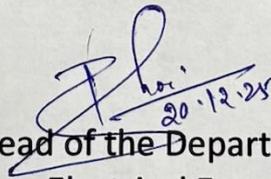


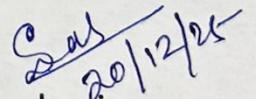
ACADEMIC SESSION: 2025-26

Discipline: Electrical Engineering	Semester: 4th	Name of the Teaching Faculty: Sri Tilu Behera (Lect. Stage-I)
Subject: Sensors and Actuators	No. of days / week class allotted	Semester From date: 22/12/2025 to 18/04/2026 Nos. of Weeks per semester: 15
Week	Class Day	Theory Topics
1 ST	1 st	Introduction to Measurement System
	2 nd	Primary Measuring Elements
	3 rd	Static Characteristics of Sensors
2 ND	1 st	Dynamic Characteristics of Sensors
	2 nd	Signal Transmission Methods
	3 rd	Electronic, Pneumatic & Smart Transmitters
3 RD	1 st	Classification of Sensors
	2 nd	Sensor Characteristics & Calibration
	3 rd	Displacement Sensors (Potentiometer, LVDT)
4 TH	1 st	Position & Motion Sensors (Encoders, Tacho)
	2 nd	Proximity Sensors & Limit Switches
	3 rd	Strain Gauge & Load Cell
5 TH	1 st	Piezoelectric Sensors
	2 nd	Hall Effect & Light Sensors
	3 rd	Accelerometer & Torque Sensors
6 TH	1 st	Capacitive & Reluctance Sensors
	2 nd	Synchros & Resolver
	3 rd	Unit II Revision
7 TH	1 st	Basics of Pressure Measurement
	2 nd	Bourdon Tube
	3 rd	Bellows & Diaphragm
8 TH	1 st	Diaphragm Type Pressure Sensors
	2 nd	Bellows Type Pressure Sensors
	3 rd	Vacuum Gauges (McLeod, Pirani, Ionization)
9 TH	1 st	Level Sensors – Float & Resistive Type
	2 nd	Inductive & Capacitive Level Sensors
	3 rd	Unit III Revision

10 TH	1 st	Flow Measurement Basics
	2 nd	Orifice & Venturi Flowmeters
	3 rd	Flow Nozzles & Pitot Tubes
11 TH	1 st	Rotameter & Positive Displacement Meters
	2 nd	Turbine & Vortex Flowmeters
	3 rd	Electromagnetic & Mass Flowmeters
12 th	1 st	Ultrasonic Flowmeter & Anemometer
	2 nd	Thermocouples
	3 rd	RTD & Thermistor
13 th	1 st	Pyrometer
	2 nd	Unit IV Revision
	3 rd	Introduction to Actuators
14 th	1 st	Pneumatic Actuators
	2 nd	Hydraulic Actuators
	3 rd	Control Valves
15 th	1 st	Electrical Actuators
	2 nd	Motors as Actuators (DC, AC, Stepper)
	3 rd	Piezoelectric Actuator & Full Revision


 20/12/2025
 Prepared By
 Tilu Behera
 Lecturer in Electronics


 20.12.25
 Head of the Department
 Electrical Engg.
 GP Sonapur


 20/12/25
 Academic
 coordinator
 GP Sonapur