

SARDAR PATEL UNIVERSITY
Programme & Subject: B.sc (Instrumentation)
Semester: III
Syllabus with Effect from: June - 2012

Paper Code: US03CINS01	Total Credit: 3
Title Of Paper: Measurements and Indicators	

Unit	Description in detail	Weighting (%)
I	Indicators and Displays Introduction: Types of Instruments, Basic Meter Movement: PMMC Movement, Practical PMMC, Taut and Band Instruments, Electrodynamometer, Moving Ion Type Instrument, Digital Display System and Indicators: Classification of Displays, Display Devices: Light Emitting Diode, Liquid Crystal Display, Other Displays: Gas Discharge Plasma Displays, Segmented Gas Discharge Displays, Bar Graph Displays, Electroluminescent Displays, Incandescent Displays, Electrophoretic Image display, Liquid Vapour Display.	25%
II	Electrical Quantity Measuring Instruments – 1 Basic Galvanometer as DC Ammeter, DC Ammeter, Multirange Ammeter, Ayrton Shunt, Requirements of Shunt, Basic Galvanometer as DC Voltmeter, DC Voltmeter, Multirange Voltmeter, Extending Voltmeter Range, Loading, Transistor Voltmeter, Chopper type DC Amplifier Voltmeter, Solid State Voltmeter, Differential Voltmeter, DC Standard / Difference Voltmeter	25%
III	Electrical Quantity Measuring Instruments – 2 AC Voltmeter using Rectifiers, Multirange AC Voltmeter, Average responding Voltmeter, Peak Responding Voltmeter, True RMS Voltmeter, True RMS Meter, Ohm Meter (Series Ohm Meter), Shunt Ohm Meter, Calibration of DC Instruments, Calibration of Ohmmeters, Multimeter	25%
IV	Measuring Instruments Introduction, output power meter, field strength meter, stroboscope, Q meter, RX meter, Automatic Bridges, Transistor tester, Megger, pH meter, Telemetry	25%

Basic Text & Reference Books:-

- Electronic Instrumentation by Kalsi
- Instrumentation Measurement and Analysis by Nakra and Chaudhri (Tata McGraw Hill)
- Electronic instrumentation and measurement techniques by Helfric and Copper (Eastern Economy Edition)

