SARDAR PATEL UNIVERSITY
Programme: B.Sc (Instrumentation-Vocational)
Semester: VI
Syllabus with effect from: June - 2013

Paper Code: US06CINV03	Total Credit: 3
Title of Paper: Control Room Instrumentation	

Unit	Description in detail	Weightage (%)
I	**Annunciation and Alarm Systems** Introduction, History, Principle of Operation, operating sequences, optional operating features, test and repeater feature, Annunciator Types: Integrated, Remote, Semigraphic, Recording, Vocal and Relay type, Solid state annunciator, annunciator cabinet, pneumatic annunciator.	25%
II	**Control Panels** Instrumentation symbols. Control panels: Introduction, Traditional control room, control room for DCS systems, Traditional control panels: flat, break front, console, traditional front panel layout, Graphic panels, back of panel layout, panel material of construction, panel specifications, human engineering, panel tubing and wiring, fitting, panel wiring, control centre inspection.	25%
III	**UPS and Voltage supplies and workstation design** Uninterrupted Voltage source, Uninterrupted Power supply features, Networks and Buses, Power failure classification, system components, standby power supply systems, system redundancy Workstation design: Classification, hardware components, software features, selection of correct platform, comparision of operating platforms.	25%
IV	**Indicators and Recorders** Indicators: Electrical movements, Indication of measurement, Parametric indication, Digital indicators, Acoustic indicators, Recorders: Introduction, Sensor mechanism, Recording methods, Charts and recorders, Tape recorders and data loggers.	25%