

GUJARAT TECHNOLOGICAL UNIVERSITY

M.E. Semester: III

Electronics and Communication Engineering

Subject Name: **Peripheral System Design & Interfacing (Major Elective - IV)**

Sr. No	Course content
1.	Bus system: Bus systems in microcomputers ST 100 bus, Multi bus, EISA, PCI Bus, HP IB/GPIB Bus, Bus and their applications. I/O
2.	Interface: Standard I/O interfaces RS-232 C, RS-232 D Centronics interface, current loop interface, and RS-449 communication interface.
3.	Design Criterion with PCs: Application of PC buses (ISA, EISA, PCI, VESA-VL) and associated signals, Handshakes, I/O and Interrupt map, Programming methodology for input/output application, GPIB signals and GPIB programming techniques operating system calls.
4.	Peripherals: Peripherals like CRT controller, Communication controllers, DMA controller, Programmable keyboard/Display interfaces and Associated circuitries.
5.	Controllers: PID controllers, Programmable logic controllers, PC based data acquisition system, Interfacing PC to various cards- Stepper motor milli volts & milliamps.
6.	Development Tools: Microprocessor development system, cross compilers, Simulator In circuit emulators, Automated test equipments etc.

Reference Books:

1. Intelligent Instrumentation by George C. Barney, PHI.
2. Student Reference Manual For Electronics Instrumentation Labs by Stanley wolf and Richard F.M. Smith, PHI.
3. Instrumentation for Engg. Measurement by James W. dally, William F. Riley, John Wilay and Sons.
4. Interfacing A Laboratory Approach by Deonzo, PHI.
5. Related IEEE/IEE publications.

