

SARDAR PATEL UNIVERSITY
Programme & Subject: M.Sc (Electronics & Communication)
Semester: IV
Syllabus with Effect from: June - 2012

Paper Code: PS04CELC02	Total Credit: 4
Title Of Paper: 8051 Microcontroller Programming & Its Application	

Unit	Description in detail	Weightage (%)
I	Introduction, microcontroller and microprocessor, the 8051 family, architecture, pin description, 8051 assembly language programming, program counter and ROM space in 8051, 8051: data types, flag bits, PSW register, register banks, stack, addressing modes	20%
II	Loop instructions, jump instructions, call instructions, arithmetic instructions, logic and compare instructions, rotate instructions, data serialization, time delay for various 8051 chips, 8051 I/O programming	20%
III	Programming 8051 timers, counter programming, serial communication, 8051 connection to RS232, 8051 serial port programming	20%
IV	8051 Interrupts, programming timer interrupts, programming external hardware interrupts, programming the serial communication interrupt, LCD interfacing, keyboard interfacing, parallel and serial ADC, DAC interfacing.	20%

Basic Text & Reference Books:-

- The 8051 Microcontroller and Embedded systems: Mazidi & Mazidi, Pearson Prentice Hall.
- Microcontroller: Architecture, programming and application: Kenneth Ayala.

