2.11 40103 MICRO CONTROLLER & APPLICATIONS

UNIT-1 ARCHITECTURE OF 8051
1.1 Evolution of MPU
1.2 MPU Vs Microcontrollers
1.3 Architecture, Block Diagram and Pin Details of 8051
1.4 Functions of Blocks and Pins

UNIT-2 SFR
2.1 ALU and Special Functional Registers (SFR) Blocks
2.2 PC, PSW, Memory Mapping
2.3 I/O Ports, Timers and Interrupts
2.4 Clock, Serial Port, Instruction Set & it's Cycle

UNIT-3 INSTRUCTION SET AND PROGRAMMING
3.1 Assembling and running an 8051 program
3.2 Addressing Modes, Data Transfer, Arithmetic & Logical Inst
3.3 Rotate and Branching Instructions
3.4 Call, Delay, PC Instructions I/O

UNIT-4 TIMER, INTERRUPT & SERIAL PROGRAMMING
4.1 I/O & Memory Programming
4.2 Timer Programming
4.3 Serial Programming
4.4 Interrupt Configuration for Internal and External & Programming

UNIT-5 INTERFACING EXTERNAL DEVICE WITH 8051
5.1 Memory Interfacing
5.2 8255, ADC/ DAC Interfacing
5.3 Relays & Opto Isolators, Sensors Interfacing
5.4 Seven Segment, LCD, Stepper Motor PWM RTC Interfacing

Reference Books:
1. Microprocessor and Microcontroller by R.Theagarajan, Sci tech Publications
2. The 8051 Microcontroller by Kenneth J Ayala, PenramInternationa Publication
3. 8085 Microprocessor and its applications by Ramesh gaonkar, Penram Publishers
4. 8086 Microprocessor by Douglas hall
5. Microprocessors and Interfacing by Douglas V.Hall and Hebber,K.M, Tata McGraw-Hill