

2.11 40103MICROCONTROLLER & APPLICATION

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 & Programing

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, Penram Internationa 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

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