

UNIT 1

Introduction to 8085 Microprocessor, Pin description of 8085, Architecture, register of 8085, addressing mode. Instruction Type and Instruction Set, Machine Cycle, Instruction Cycle, Timing Diagram.

Memory System, internal and External memory and concept of Virtual Memory. Hardware Interfacing or Types of I/O addressing-Interfacing Memory and Peripheral (I/o Mapped I/O and memory mapped I/O) 16 Periods

UNIT 2

Assembly Language Programming Stacks and Subroutine, Interrupts of 8085-Hardware and Software interrupts. Difference between RICS and CISC Processor 8 Periods

UNIT 3

Interfacing ICs, Programmable Peripheral Interface: Intel 8255, DMA controller: Intel 8257, Programmable Interrupt Controller: Intel 8259, Rs232 serial port 13 Periods

UNIT 4

Application of Microprocessor 8085 in Instrumentation-Interfacing of Printer, Stepper Motor, Annunciator. Basics of 8086(16 bit Microprocessor), Architecture of 8086, Concept of parallel processing in 8086 11 Periods

UNIT 1

Chapter-1, 2, 3, 4, 5, 6- Ramesh Gaonkar, Microprocessors architecture, programming and Applications, Wiley Eastern Ltd. (2002), 2nd Edition

UNIT 2

Chapter-7, 9, 12, 18- Ramesh Gaonkar, Microprocessors architecture, programming and Applications, Wiley Eastern Ltd. (2002), 2nd Edition

UNIT 3

Chapter-10, 12, 13- P.K Ghosh & P.R Sridhar, 8085 to 8088 microprocessor, John Wiley & Sons, 2nd Edition

Chapter-16 - Ramesh Gaonkar, Microprocessors architecture, programming and Applications, Wiley Eastern Ltd. (2002), 2nd Edition

UNIT 4

Chapter-12 - R. Thegarajan and S. Dhanpal, Microprocessor and its Application, New Age International Private Ltd., 1st Edition

Chapter-2- Liu Gibson, Microprocessor Systems: The 8086/8088 family Architecture, Programming & Design, PHI, 1999, 2nd Edition

Essential Books:

1. Ramesh Gaonkar, Microprocessors architecture, programming and Applications, Wiley Eastern Ltd. (2002), 2nd Edition
2. P.K Ghosh& P.R Sridhar, 0000 to 8085 microprocessor, John Wiley & Sons, 2nd Edition
3. Liu Gibson, Microprocessor Systems: The 8086/8088 family Architecture, Programming& Design, PHI, 1999, 2nd Edition
4. R. Thegarajan and S. Dhanpal, Microprocessor and its Application, New Age International Private Ltd, 1st Edition

Suggested Books:

1. K. Udaya Kumar & B.S. Uma Shankar, The 8085 Microprocessor: Architecture, Programming and Interfacing”, Pearson Education
2. Barry B. Brey and C R Sarma, The Intel Microprocessors 8086/8088, 80186/80188, 80286, 80386, 80486,
3. Pentium and Pentium Pro-Processor Architecture, Programming and Interfacing, Pearson Education, (2005)
4. Walter Triebel &AvtarA.Singh, 8088 and 8086 Microprocessors: Programming, Interfacing, Software Hardware and Applications, Pearson Education, 4th edition
5. D. V. Hall, “Microprocessors and Interfacing”, Tata McGraw Hill (2005), revised 2nd edition

Practical (based on ELI-DC-I-602)

1. To write an assembly language program to perform basic mathematical operations (addition, subtraction, multiplication, division)
2. To write an assembly language program to generate first N terms of an A.P. / G.P. series
3. To write an assembly language program to generate first N terms of Fibonacci series
4. To write an assembly language program to arrange the given list of number in ascending / descending order
5. To write an assembly language program to calculate N!
6. To write an assembly language program to separate prime numbers in a given list of number
7. To write an assembly language program to convert a number from one number system to another.
8. To write an assembly language program to design a clock 36
9. To write an assembly language program to calculate a mathematical expression (for e.g. $2N/N!$)
10. To write an assembly language program to calculate value of $\sin(x)$
11. To implement basic 8086 interrupts using assembler