

MICROPROCESSOR AND NETWORKING

UNIT – I : Microprocessor based systems: hardware and interfacing.

Microprocessors – Microprocessor instruction set and Languages – Microprocessor architecture and its operations – memory I/O Devices – logic devices for interfacing – 8085 MPU – examples of an 8085based microcomputer – memory interfacing – SDK-85 memory system – basic interfacing concepts – interfacing devices – memory mapped I/O – testing and trouble shooting I/O interfacing circuits.

UNIT – II : Addressing modes and instruction of 8085

The 8085 programming model – instruction classification – instruction format – writing programs and executing simple programs – overview of the 8085 instruction set – Data transfer operations arithmetic operations – logic operations – branch operations – writing assembly language programs – debugging a program.

Programming techniques – looping, counting and indexing additional data transfer and 16 bit arithmetic instructions – arithmetic operations related to memory – logic operations – dynamic debugging.

UNIT – III : Programming concepts and applications.

Counters and time delays – Hexadecimal counter – illustrative program zero to nine (Modulo ten) counter – generating pulse waveforms – debugging counter and time-delay programs – stack and subroutines – stack –subroutine – conditional call and return instructions – advanced subroutine concepts.

BCD to Binary conversion – Binary to BCD conversion – BCD to Seven segment – LED code conversion – Binary to ASCII and ASCII to Binary code conversion – BCD addition – BCD subtraction – Introduction to advanced instructors and applications – multiplication – subtraction with carry.

UNIT –IV : Introduction to Networks.

Introduction : The uses of computer networking – networking structure – Networking architecture – OSI reference model – services – Networking standardization – example networks.

UNIT – V : The Physical Layer.

Theoretical basis for data communication – transmission media – analog transmission – digital transmission – transmission and switching ISDN – Integrated services digital network terminal handling.

Books for Study:

Rames S.Gaonker (1997), Microprocessor Architecture Programming and applications – Penram International Publishers.

Andrew S.Tanenbaum (1995) computer networks - Prentice Hall, New Delhi.