

8086 MICROPROCESSOR & PERIPHERALS

PART - A

UNIT - 1

Introduction, Microprocessor based computer system, Architecture of 8086 Microprocessor, Pin functions, Clock generator, Minimum /Maximum mode of operation.

7 Hours

UNIT - 2

Read /Write Timing diagrams, 8086 instruction set, Instruction template for data transfer instruction, addressing modes.

7 Hours

UNIT - 3

Assembler directives, Programming examples.

6 Hours

UNIT - 4

Linking and relocation, Stacks, Procedures, Interrupt and Interrupt routines, Macros.

6 Hours

PART - B

UNIT - 5

DOS interrupt 21H function to read a character from keyboard, Write character to console, Creation of a new file, read/write from/ to file, Serial/parallel communication.

Interfacing devices, Memory devices and Interfacing

7 Hours

UNIT - 6

8255PPI device and interfacing, Keyboard, display, ADC, DAC, Stepper motor and Printer interfacing using 8255.

7 Hours

UNIT - 7

8279 programmable keyboard/display controller and interfacing, 8253 and interfacing, 8259 programmable interrupt controller and interfacing

6 Hours

UNIT - 8

8257 DMA controller and interfacing, serial communication using 8251 & 8087 Numeric data processor and interfacing, RS 232 serial communication standards.

6 Hours

TEXTBOOKS:

- 1 **Advanced Microprocessor and Peripherals-** A.K.Ray and K.M. Bhurchandi, Tata McGraw Hill.
- 2 **Microcomputer systems 8086/8088 family, Architecture, Programming and Design** - Yu-Cheng Liu & Glenn A Gibson, 2nd Edition- July 2003, Prentice Hall of India.

REFERENCE BOOKS:

1. **Microprocessor and Interfacing, Programming & Hardware-** Douglas V Hall, 2nd Edition, Tata McGraw Hill
2. **Microprocessor Architecture, Programming and Applications with the 8085-** Ramesh S Gaonkar, 4th Edition, Penram International.