

Fourth year of Five Years integrated M.Sc (Physics)
M.Sc. - IV, Semester –VIII

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MP 406 : Microprocessor

- **INTRODUCTION TO MICROPROCESSOR-8085** (06 Hours)
Basic 8085 microprocessor architecture and its functional blocks, 8085 microprocessor IC pin outs, Memory and Address, data and control buses, Clock signals, Instruction cycles, Machine cycles, Timing states, Instruction timing diagrams.
- **PROGRAMMING 8085 MICROPROCESSOR** (06 Hours)
Basic 8085 instruction set, Programming Techniques with Additional Instructions, Counters and Time delays, Stack and Subroutines, Code Conversion, BCD Arithmetic, and 16-Bit Data Operations.
- **8085 INTERFACING** (06 Hours)
Bus interfacing concepts, Timing for the execution of input and output (I/O) instructions, I/O address decoding, Memory and I/O interfacing, Serial I/O lines of 8085.
- **INTERRUPTS** (08 Hours)
Interrupt structure of 8085, RST(restart) instructions, vectored interrupt, interrupt process and timing diagram of interrupt instruction execution.
- **INTERFACING PERIPHERALS (I/OS) AND APPLICATIONS** (08 Hours)
Interfacing Data Converters, Programmable Interface Devices, General-Purpose Programmable Peripheral Devices, Serial I/O and Data Communication, Microprocessor Applications.
- **ADVANCE MICROPROCESSORS** (08 Hours)
Introduction to Microprocessor-8086, Comparison between 8085 and 8086, Development of x86 series of microprocessors and microcontrollers.

(Total Contact Time (Theory) : 42 Hours)

BOOKS RECOMMENDED :

1. [Gaonkar R. S.](#) *Microprocessor architecture, programming and applications : With the 8085/8080A* Wiley Eastern 1995
2. [Srinath N. K.](#) *8085 Microprocessor programming and interfacing* Prentice Hall 2005
3. [Uffenbeck J.](#) *Microcomputers and microprocessors : The 8080, 8085 and Z-80 programming interfacing and troubleshooting* Prentice Hall 2005
4. [Ghosh P. K.](#) and [Sridhar P. R.](#) *0000 to 8085: Introduction to Microprocessors for engineers and scientists* Prentice Hall 2006
5. [Rafiquzzaman M.](#) *Microprocessors and Microcomputer-Based System Design* CRC Press 1995