Paper Code : MAP: 501
Paper Name : Microprocessor Architecture & Programming

Teaching Hours (Per Week)		**Examination Scheme**		
TH. (hours)	Pr. (hours)	Internal	External	Total
		Th. (marks)	Th. (marks)	100 (marks)
4		30	70	

Lectures = 68 hours

Detailed Syllabus

UNIT I
8085 Microprocessor Architecture & Microcomputer System: 10 Hrs.

Evolution of Microprocessor, Microprocessor Architecture and its operations, Memory, Buses, Input/Output devices, ALU,Timing and Control Unit, registers ,Pin Configuration,Intruction Cycle, Timing Diagram.

UNIT II
Introduction Set of Intel 8085 microprocessor: 18 Hrs.
Instructions Classification, Instruction and Data Formats, Addressing Modes, Opcode and Operands, Instruction Word Size, Static and Dynamic Debugging.

UNIT III:
Introduction to 8085 Instructions: 15 hrs
Counters and Time delays, Stack, subroutine, Restart, Conditional Call and Return Instructions, Advanced subroutine concepts.

UNIT IV
Assembly Language Programming: 15 Hrs.
Assembly Language, High-Level Language, Low- Level Language, Machine Language.
Operations, Arithmetic Operations related to Memory, Logic Operations, and Branch.
BCD to Binary and Binary to BCD Conversion, BCD Addition, BCD Subtraction, Multiplication.

UNIT V Intel 8086
Microprocessor: 10 Hrs.
Pin Description, Operating Modes, Operation, Registers, Interrupts, Addressing Modes, Assembly Language Programming.

Other Microprocessor:
Brief introduction of Intel Microprocessor: 80186, 8080, 80188, 80386, 80486. Microprocessor: Z80, Z800, Z8000.

RECOMMENDED BOOKS:

1. Microprocessor Architecture, Programming and Applications with 8085/8080A – Ramesh S. Gaonkar, Wiley Eastern Limited.
2. Fundamentals of Microprocessor and Microcomputers--B.RAM, Dhanpat Rai Pub.
3. The Intel Microprocessors 8086/8080,186/286,386,486,Pentium and Pentium Pro Processor Architecture. Programming and Interfacing--Barry R. Brey, PHI.