

HEMCHANDRACHARYA NORTH GUJARAT UNIVERSITY, PATAN.

B.E. SEMESTER IV (ELECTRONICS & COMMUNICATION)

REVISED NEW SYLLABUS

Subject Code: EC-403

Subject Name: MICROPROCESSOR AND INTERFACING

Teaching Scheme			Examination Scheme				
Theory Hrs.	Tutorial Hrs.	Practical Hrs.	Theory Hrs.	Theory Marks	Pract./Viva Marks	Termwork Marks	Total Marks
4	-	2	3	100	25	25	150

Syllabus:

1. Introduction to Microprocessor: Microprocessor systems with bus organization, Microprocessor Architecture & Operations, Memory, I/O Device, Memory and I/O Operations

2. 8085 Microprocessor Architecture: Address, Data And Control Buses, Pin Functions, Demultiplexing Of Buses, Generation Of Control Signals, Instruction Cycle, Machine Cycles, T-States, Memory Interfacing.

3. Assembly Language Programming Basics: Classification of Instructions, Addressing Modes, 8085 Instruction Set, Instruction And Data Formats, Writing, Assembling & Executing A Program, Debugging The Programs, Decision Making, Looping, Stack & Subroutines, Developing Counters And Time Delay Routines, Code Conversion, BCD Arithmetic And 16-Bit Data Operations.

4. Interfacing Concepts: Ports, Interfacing Of I/O Devices, Interrupts In 8085, Interfacing of Data Converters (D-To-A And A-To-D), Programmable Interfacing Devices Like 8279 Keyboard/Display Interface, 8255A PPI, 8253/8254 Timer, 8259A PIT, 8237 DMA Controller, Serial I/O Concepts, SID And SOD, 8251A USART. Interfacing of above chips With 8085, Programming them In Deferent Modes, Practical Applications

Reference Books:

1. Microprocessor Architecture, Programming, and Applications with the 8085 -Ramesh S. Gaonkar Pub: Penram International.
2. Microcomputers and Microprocessors: The 8080,8085 and Z-80 Programming, Interfacing and Troubleshooting by John E. Uffenbeck.
3. Microprocessor and Microcontroller fundamentals. The 8085 and 8051 Hardware and Software by William Kleitz.