AMEC18 MICROPROCESSORS & MICROCONTROLLERS

UNIT-1 8085 PROCESSOR
1.1 Hardware Architecture, pinouts, Functional Building Blocks of Processor
1.2 Memory organization, I/O ports and data transfer concepts, Timing Diagram, Interrupts.

UNIT-2 PROGRAMMING OF 8085 PROCESSOR
2.1 Instruction -format and addressing modes, Assembly language format, Data transfer,
2.2 Data manipulation & control instructions, Programming:
2.3 Loop structure with counting & Indexing, Look uptability, Subroutine instructions - stack.

UNIT-3 8051 MICRO CONTROLLER
3.1 Hardware Architecture, pinouts, Functional Building Blocks of Processor, Memory organization, I/O ports and data transfer concepts,
3.2 Timing Diagram, Interrupts- Data Transfer, Manipulation, Control Algorithms & I/O instructions, Comparison to Programming concepts with 8085.

UNIT-4 PERIPHERAL INTERFACING
4.1 Study on need, Architecture, configuration and interfacing, with ICs: 8255, 8259, 8254, 8279,
4.2 A/D and D/A converters &Interfacing with 8085& 8051.

UNIT-5 MICRO CONTROLLER PROGRAMMING & APPLICATIONS
5.1 Simple programming exercises, key board and display interface,
5.2 Control of servo motor, stepper motor control
5.3 Application to automation systems.

Reference Books:
1. Krishna Kant, "Microprocessor and Microcontrollers", Eastern Company Edition, Prentice Hall of India, New Delhi, 2007.
2. B.RAM," Computer Fundamentals Architecture and Organization" New Age International Private Limited, Fifth edition, 2017.
3. Soumitra Kumar Mandal, Microprocessor & Microcontroller Architecture, Programming & Interfacing using 8085,8086,8051,McGraw Hill Edu,2013