

# KIIT POLYTECHNIC, BHUBANESWAR

## LESSON PLAN Session (2022-2023)

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| Discipline: Computer Science and Engineering     | Semester: 4th ,<br>Summer/2023 | Name of the Faculty:<br>Pampa Nandi<br>Asst. Prof.<br>Email ID:<br><a href="mailto:pnandifet@kp.kiit.ac.in">pnandifet@kp.kiit.ac.in</a> |
| Subject: MICROPROCESSOR AND MICROCONTROLLER TH.3 | No. of Days/week: 05           | Start Date: 13/02/2023<br>End Date: 23/05/2023  |

| Week | Class Day | Theory Topic  |
|------|-----------|---|
| 1st  | 1st       | Discussion of microprocessor and its application                    |
|      | 2nd       | Distinguish between microprocessor and microcomputer                |
|      | 3rd       | Discussion of Architecture of processor and Bus system in processor |
|      | 4th       | Pin configuration of Intel 8085 microprocessor                      |
|      | 5th       | Architecture of Intel 8085 processor                                |
| 2nd  | 1st       | Revising the taught portions  |
|      | 2nd       | Doubt clearance   |
|      | 3rd       | Pin configuration of Intel 8085 microprocessor                      |
|      | 4th       | Architecture of Intel 8085 processor                                |
|      | 5th       | Architecture of Intel 8085 processor                                |
| 3rd  | 1st       | Registers of Intel 8085. Distinguish between SPR and GPR            |
|      | 2nd       | Stack, stack pointer and stack top                                  |
|      | 3rd       | Addressing modes in Intel 8085                                      |
|      | 4th       | Addressing modes in Intel 8085                                      |
|      | 5th       | Architecture of Intel 8085  |
| 4th  | 1st       | Types of instruction  |
|      | 2nd       | Types of instruction  |
|      | 3rd       | Simple programming examples   |
|      | 4th       | Basic assembler Directives  |

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|      | 5th | Programming on logic operations                                    |
| 5th  | 1st | Programming on logic operations                                    |
|      | 2nd | Programming on Delay   |
|      | 3rd | Programming on Delay   |
|      | 4th | Programming on looping, counting, Indexing (JMP and CALL)          |
|      | 5th | Compare between two numbers, Array Handling, code conversion       |
| 6th  | 1st | T-state, Fetch cycle, Machine cycle and Instruction cycle          |
|      | 2nd | T-state, Fetch cycle, Machine cycle and Instruction cycle          |
|      | 3rd | Differentiate between Instruction cycle, machine cycle and T state |
|      | 4th | Timing diagram of MOV,DCR,MVI,LDA,DCX                              |
|      | 5th | Timing diagram of MOV,DCR,MVI,LDA,DCX                              |
| 7th  | 1st | Timing diagram of MOV,DCR,MVI,LDA,DCX                              |
|      | 2nd | Timing diagram of MOV,DCR,MVI,LDA,DCX                              |
|      | 3rd | Revision of Timing diagram<br>Doubt clearance                      |
|      | 4th | Pin configuration of Intel 8255 and discussion of interfacing      |
|      | 5th | Pin configuration of Intel 8255 and discussion of interfacing      |
| 8th  | 1st | Memory mapping and IO mapping                                      |
|      | 2nd | Memory interfacing with RAM and EPROM                              |
|      | 3rd | 8257 DMA controller  |
|      | 4th | Traffic light controlling, stepper motor control                   |
|      | 5th | Traffic light controlling, stepper motor control                   |
| 9th  | 1st | ADC and DAC interfacing  |
|      | 2nd | Internal architecture of Intel 8086, maximum and minimum mode      |
|      | 3rd | Internal architecture of Intel 8086, maximum and minimum mode      |
|      | 4th | Assignment   |
|      | 5th | Checking of assignment   |
| 10th | 1st | Class test   |
|      | 2nd | Internal ready revision  |
|      | 3rd | Pin details of 8086  |
|      | 4th | Pin details of 8086  |
|      | 5th | Pin details of 8086  |
| 11th | 1st | Addressing modes of 8086   |
|      | 2nd | Instruction set of 8086  |

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|      | 3rd | Instruction set of 8086  |
|      | 4th | Simple programming   |
|      | 5th | Simple programming   |
| 12th | 1st | Addressing modes of Intel 8086   |
|      | 2nd | Distinguish between Microprocessor & Microcontroller   |
|      | 3rd | 8 bits & 16-bit microcontroller  |
|      | 4th | CISC & RISC processor  |
|      | 5th | Architecture of 8051 Microcontroller   |
| 13th | 1st | Signal Description of 8051 Microcontrollers  |
|      | 2nd | Signal Description of 8051 Microcontrollers  |
|      | 3rd | Memory Organisation-RAM structure, SFR   |
|      | 4th | Registers, timers, interrupts of 8051 Microcontrollers   |
|      | 5th | Registers, timers, interrupts of 8051 Microcontrollers   |
| 14th | 1st | Addressing modes of 8051   |
|      | 2nd | Simple 8051 Assembly Language Programming Arithmetic & Logic Instructions, JUMP, LOOP, CALL Instructions, I/O Port Programming |
|      | 3rd | Interrupts, Timer & Counters, Serial Communication   |
|      | 4th | Microcontroller interrupts and interfacing with 8255   |
|      | 5th | Microcontroller interrupts and interfacing with 8255   |
| 15th | 1st | Final revision, previous year questions discussion.  |
|      | 2nd | Final revision, previous year questions discussion.  |
|      | 3rd | Practice test  |
|      | 4th | Practice test  |
|      | 5th | Practice Test  |