

## LESSON PLAN

**Name of the faculty** : Er. Gaurav Kumar

**Discipline** : ECE

**Semester** : 4<sup>th</sup>

**Subject** : Microcontroller

**Lesson Plan Duration** : 15 weeks (From 4<sup>th</sup> Jan, 2020 to 20 April 2020)

**Work Load (Lecture/ Practical) per week (in hours):** Lecture-02, Practical-02

Week	Theory		Practical	
	Lecture Day	Topic	Practical Day	Topic
1st	1st	Introduction to microprocessor	1st	Introduction of Microprocessor and Lab Equipment
	2nd	Architectures of 8086 Microprocessor		
2nd	1st	Architectures of 8085 Microprocessor	2nd	Write a program using 8085 for Hexadecimal addition and subtraction of two numbers.
	2nd	Instruction set		
3rd	1st	PIN Diagram of 8086	3rd	Write a program to perform multiplication of two 8 bit numbers using 8085
	2nd	PIN Diagram of 8085		
4th	1st	Interrupt Structure	4th	Write a program to perform division of two 8 bit numbers using 8085
	2nd	Interrupt Structure		
5th	1st	Addressing modes	5th	Write a program using 8086 for finding the square root of a given number and verify.
	2nd	Addressing modes		
6th	1st	Assembly Language Programming Example	6th	Write a program using 8086 to copy 12 bytes of data from source to destination & verify
	2nd	Architectures of 8086 microprocessor		
7th	1st	Architectures of 8086 microprocessor	7th	Write a program to find maximum and minimum from series using 8086.
	2nd	Memory Segmentation		
8th	1st	Memory Segmentation	8th	Write a Program using 8085 for arranging an array of Numbers in Descending order and Verify
	2nd	Addressing Mode of 8086		
9th	1st	Addressing Mode of 8086	9th	Write a Program using 8085 for arranging an array of Numbers in Ascending order and Verify
	2nd	PIN Diagram of 8086		

10th	1st	PIN Diagram of 8086	10th	Write a program to control the operation of stepper motor using 8085/8086 and 8255 PPI.
	2nd	Instruction set of 8086		
11th	1st	Instruction set of 8086	11th	Write a program to control the operation of stepper motor using 8085/8086 and 8255 PPI.
	2nd	Instruction set of 8086		
12th	1st	Directive and operators	12th	Write a program to interface 8X8 LED Matrix Display using 8085/8086 microprocessors and 8255 PPI.
	2nd	Programming Example		
13th	1st	8255 Programmable peripheral interface	13th	Write a program to interface 8X8 LED Matrix Display using 8085/8086 microprocessors and 8255 PPI.
	2nd	8255 Programmable peripheral interface		
14th	1st	Interfacing keyboard and seven segment display	14th	Revision of all Experiment
	2nd	8254 (8253) programmable interval timer		
15th	1st	8254 (8253) programmable interval timer	15th	Internal Viva Exam
	2nd	8259A programmable interrupt controller		
16th	1st	8259A programmable interrupt controller	16th	Internal Viva Exam
	2nd	8237 DMA controller		

## STUDY MATERIAL

### TEXT BOOKS:

1. Microprocessor 8085 by Ramesh Gaonkar
2. Mohamed Ali Mazidi, Janice Gillispie Mazidi, Rolin McKinlay, "The 8051
3. Fundamental of microprocessor and microcomputer by B.Ram
4. A.P.Godse, Advanced Microprocessor, Technical Publications.

### REFERENCE:

1. Douglas V Hall, "Microprocessors and Interfacing, Programming and Hardware, TMH, 2012
2. The 8086 Microprocessor: Programming & Interfacing The PC by Kenneth J. Ayala

**E-BOOKS:**

<http://www.wileyindia.com/8086-programming-and-advance-processor-architecture-9788126530915.html>

<http://www.scribd.com/doc/20838382/Microprocessor-8085-notes#scribd>

<http://www.veltechuniv.edu.in/ppt/ECE/microprocessor.pdf> Session: 2015-2016