MERI College of Engineering and Technology
(MERI - CET)

Session 2020-2021 PCC-CSE-204G

Lesson Plan

Name of the Faculty	:	MR. **SAHARSH GERA** (THEORY)
Discipline	:	Computer Science and Engineering
Semester	:	4th
Subject	:	**Computer Organization & Architecture (PCC-CSE-204G)**
Lesson Plan Duration	:	15 Weeks (from MAY, 2021 to AUG, 2021)

** **Work Load (Lecture/ Practical) per week (in hours):** Lecture-03

Week	Theory	
	Lecture day	Topic(Including assignment/test)
1st	1st	**Data representation**: Data Types
	2nd	Complements
	3rd	Fixed-Point Representation, Conversion of Fractions
2nd	1st	Floating-Point Representation
	2nd	Gray codes
	3rd	Decimal codes, Alphanumeric codes
3rd	1st	Error Detection Codes
	2nd	**Register Transfer and Microoperations :** Register Transfer Language
	3rd	Register Transfer, Bus and Memory Transfers

4th	1st	Arithmetic Microoperations
	2nd	Logic Microoperations
	3rd	Shift Microoperations, Arithmetic Logic Shift Unit **(ASSIGNMENT – 01)**
5th	1st	**Basic Computer Organization and Design :** Instruction Codes
	2nd	Computer Registers
	3rd	Computer Instructions, Timing and Control
6th	1st	Instruction Cycle
	2nd	Memory-Reference Instruction
	3rd	Input-Output Instruction, Complete Computer Description
7th	1st	Design of Basic Computer
	2nd	Design of Accumulator Logic
	3rd	**Central Processing Unit :** General Register Organization, Stack organization
8th	1st	Instruction Format
	2nd	Addressing Modes
	3rd	Data Transfer and Manipulation, Program Control
9th	1st	RISC
	2nd	CISC (**ASSIGNMENT – 02)**
	3rd	**Pipelining**: Basic Concepts of Pipelining, Throughput and Speedup
10th	1st	Pipeline Hazards

	2nd	**Parallel Processors**: Introduction to Parallel Processors
	3rd	Concurrent access to memory and Cache Coherency **(ASSIGNMENT – 03)**
11th	1st	**Input-output Organization :** I/O device interface , I/O transfers–program controlled
	2nd	interrupt driven and DMA
	3rd	Privileged and Non-Privileged Instructions, Software Interrupts
12th	1st	**Memory organization:** Memory Hierarchy
	2nd	Main Memory
	3rd	Auxiliary Memory, Associative Memory
13th	1st	Cache Memory
	2nd	Associative Mapping
	3rd	Direct Mapping, Set-Associative Mapping
14th	1st	Writing into Cache
	2nd	Cache Initialization, Virtual Memory.
	3rd	**(ASSIGNMENT – 04),** Revision of unit-01
15th	1st	Revision of unit-02
	2nd	Revision of unit-03
	3rd	Revision of unit-04