MERI College of Engineering & Technology
(MERI-CET)

Course- ECE

Session: 2020-2021

Semester: 7th

Department: CSE

Lesson Plan

Name of the faculty : Mr. Neeraj kumar

Discipline : Computer Science and Engineering

Semester : 5th

Subject **: COMPUTER ORGANIZATION & ARCHITECTURE**

Lesson Plan Duration : 15 weeks (From August, 2020 to November 2020)

Work Load (Lecture/ Practical) per week (in hours): Lecture-03, Practical-01

Week	Theory	
	Lecture day	**Topic(Including assignment/test)**
1st	1st	**Data representation:** Data Types, Complements
	2nd	Fixed-Point Representation
2nd	1st	Conversion of Fractions, Floating-Point Representation
	2nd	Gray codes, Decimal codes, Alphanumeric codes, Error Detection Codes.
3rd	1st	**Register Transfer and Micro operations:** Register Transfer Language
	2nd	Register Transfer, Bus and Memory Transfers, Arithmetic Micro operations ,
4th	1st	Logic Micro operations, Shift micro operations, Arithmetic Logic Shift Unit.
	2nd	**Basic Computer Organization and Design :** Instruction Codes,
5th	1st	Computer Registers, Computer Instructions, Timing and Control, Instruction Cycle,
	2nd	Memory-Reference Instruction, Input-Output Instruction, Complete Computer Description

6th	1st	Design of Basic Computer, Design of Accumulator Logic.
	2nd	**Central Processing Unit :** General Register Organization,
7th	1st	Addressing Modes, Data Transfer and Manipulation, Program Control, RISC, CISC
	2nd	Pipeline and Vector Processing: Introduction to Parallel Processors
8th	1st	Amdahl's Law, Pipelining, Arithmetic Pipeline, Instruction Pipeline
	2nd	RISC Pipeline, Vector Processing, Array Processors,
9th	1st	SIMD Array Processors, Pipeline Hazards.
	2nd	**Input-output Organization:** I/O device interface,
10th	1st	I/O transfers–program controlled
	2nd	
11th	1st	interrupt driven and DMA, Privileged and Non-Privileged Instructions
	2nd	Software Interrupts **Memory organization:** Memory Hierarchy,
12th	1st	Main Memory, Auxiliary Memory
	2nd	Associative Memory, Cache Memory,
13th	1st	
	2nd	Associative Mapping, Direct Mapping
14th	1st	Set-Associative Mapping, Writing into Cache.
	2nd	Cache Initialization, Virtual Memory
15th	1st	Stack organization, Instruction Format
	2nd	
16th		
17th	**Sessional -II Examination+Activity**	

Faculty Signature