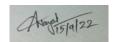
## LESSON PLAN (Winter-2022)

Discipline:	Semester: 5th	Name of the Teaching Faculty: Amit Kumar Nayak
Electrical		, ,
Subject: DE&	No of Days /per	Semester From date: 15.09.2022 To 22.12.2022
MP	week class	No of Weeks:14
(TH-3)	allotted: 5	
Week	Class Day	Theory Topics
1st	1st	<ul><li>1 Basics Of Digital Electronics (15)</li><li>1.1 Binary, Octal, Hexadecimal number systems and compare with Decimal system.</li></ul>
	2nd	1.2 Binary addition, subtraction, Multiplication and Division.
	3rd	1.3 1's complement and 2's complement numbers for a binary number
	4th	1.4 Subtraction of binary numbers in 2's complement method.
	5th	1.5 Use of weighted and Un-weighted codes & write Binary equivalent number for a number in 8421, Excess-3 and Gray Code and vice-versa.
2nd	1st	1.6 Importance of parity Bit.
	2nd	1.7 Logic Gates: AND, OR, NOT, NAND, NOR and EX-OR gates with truth table.
	3rd	1.8 Realize AND, OR, NOT operations using NAND, NOR gates.
	4th	Continue
	5th	1.9 Different postulates and De-Morgan's theorems in Boolean algebra.
3rd		PUJA HOLIDAYS
	1st	1.10 Use Of Boolean Algebra For Simplification Of Logic Expression
4th	2nd	1.11 Karnaugh Map For 2,3,4 Variable, Simplification Of SOP And POS Logic Expression Using K-Map
	3rd	Continue
	4th	Combinational Logic Circuits (15)     Sive the concept of combinational logic circuits.
	5th	2.2 Half adder circuit and verify its functionality using truth table.
	1st	2.3 Realize a Half-adder using NAND gates only and NOR gates only.
	2nd	2.4 Full adder circuit and explain its operation with truth table.
5th	3rd	2.5 Realize full-adder using two Half-adders and an OR – gate and write truth table
	4th	Continue
	5th	2.6 Full subtractor circuit and explain its operation with truth table.
	1st	Continue
	2nd	2.7 Operation of 4 X 1 Multiplexers and 1 X 4 demultiplexer
6th	3rd	Continue
	4th	2.8 Working of Binary-Decimal Encoder & 3 X 8 Decoder.
	5th	Continue
	1st	2.9 Working of Two bit magnitude comparator.
	2nd	Continue
7th	3rd	3. Sequential Logic Circuits (15) 3.1 Give the idea of Sequential logic circuits.
	4th	3.2 State the necessity of clock and give the concept of level clocking and edge triggering,
	5th	3.3 Clocked SR flip flop with preset and clear inputs.
8th	1st	3.5 Construct level clocked JK flip flop using S-R flip-flop and explain with truth table
	2nd	3.6 Concept of race around condition and study of master slave JK flip flop.
	3rd	3.7 Give the truth tables of edge triggered D and T flip flops and draw their symbols.
	4th	3.8 Applications of flip flops.

	5th	3.9 Define modulus of a counter
9th	1st	3.10 4-bit asynchronous counter and its timing diagram.
	2nd	3.11 Asynchronous decade counter.
	3rd	3.12 4-bit synchronous counter.
	4th	3.13 Distinguish between synchronous and asynchronous counters.
	5th	3.14 State the need for a Register and list the four types of registers.
10th	1st	3.15 Working of SISO, SIPO, PISO, PIPO Register with truth table using flip flop.
	2nd	<ul><li>4. 8085 Microprocessor(20)</li><li>4.1 Introduction to Microprocessors, Microcomputers</li></ul>
	3rd	4.2 Architecture of Intel 8085A Microprocessor and description of each block.
	4th	Continue
	5th	4.3 Pin diagram and description.
	1st	4.4 Stack, Stack pointer & stack top
	2nd	4.5 Interrupts
11th	3rd	4.6 Opcode & Operand,
1101	4th	4.7 Differentiate between one byte, two byte & three byte instruction with example.
	5th	4.8 Instruction set of 8085 example
	1st	Continue
12th	2nd	4.9 Addressing mode
	3rd	4 .10 Fetch Cycle, Machine Cycle, Instruction Cycle, T-State
1201	4th	4.11 Timing Diagram for memory read, memory write, I/O read, I/O write
	5th	Continue
	1st	4.12 Timing Diagram for 8085 instruction
13th	2nd	4.13 Counter and time delay.
	3rd	4. 14 Simple assembly language programming of 8085.
	4th	Continue
	5th	Continue
	1st	<ul><li>5. Interfacing And Support Chips(10)</li><li>5.1 Basic Interfacing Concepts, Memory mapping &amp; I/O mapping</li></ul>
	2nd	Continue
14th	3rd	5.2 Functional block diagram and description of each block of Programmable peripheral interface Intel 8255,
	4th	Continue
	5th	5.3 Application using 8255: Seven segment LED display,
	1st	Continue
15th	2nd	Square wave generator,
	3rd	Continue
	4th	Traffic light Controller
	5th	Continue



Signature of the Faculty