LESSON PLAN (Winter-2022)

Discipline: IT	Semester: 3rd	Name of the Teaching Faculty: R.R. SETH
Subject: DIGITAL ELECTRONICS	No of Days /per week class allotted:4	Semester From date: 1.10.2021 To 8.1.2022 No of Weeks:14
Week	**Class Day**	**Practical Topics**
2nd	1st	Verify truth tables of AND, OR, NOT, NOR gates & simplifications of Boolean gates
	2nd	Verify truth tables of NAND, XOR, XNOR gates & simplifications of Boolean gates
3rd		**PUJA VACATION**
4th	1st	Implement various gates by using universal properties of NOR gates verify and truth table tabulate data.
	2nd	Implement various gates by using universal properties of NAND gates verify and truth table tabulate data.
5th	1st	Construct & verify operation of Half adder using logic gates.
	2nd	Construct & verify operation of Half adder using logic gates.
6th	1st	Construct & verify operation of Half subtractor using logic gates.
	2nd	Construct & verify operation of Full subtractor using logic gates.
7th	1st	Design &Implement a 4-bit Binary to Gray code converter.
	2nd	Design &Implement a 4-bit Binary to Gray code converter.
8th	1st	Design & Implement a Single bit/ two bit digital comparator circuit
	2nd	Design Multiplexer (4:1)
9th	1st	De-multiplexer (1:4).
	2nd	Study the operation of flip-flops (i)S-R flip flop (ii) J-K flip flop
10th	1st	Study the operation of flip-flops(iii) D flip flop (iv) T flip flop
	2nd	Realize a 4-bit asynchronous UP/Down counter with a control for up/down counting.
11th	1st	Realize a 4-bit asynchronous UP/Down counter with a control for up/down counting.
	2nd	Study shift registers.
12th	1st	verify the operation 8-bit D /A and A/ D conversion & test its performance
	2nd	verify the operation 8-bit D /A and A/ D conversion & test its performance
13th	1st	Study display devices LED, LCD, 7-segment displays.
	2nd	Mini Project : To collect data like pin configurations, display devices, Operational characteristics, applications and critical factors etc. on all digital ICs studied in theory and compile a project report throughout and submit at the end of the semester. To assemble and tests circuits using above digital ICs with test points e.g. Digital Clock / Frequency Counter / Running Glow Light upto 999/Solar cell & Opto coupler applications.
14th	1st	Continue.
	2nd	Digital Works 3.04/ higher version is a graphical design tool that enables you to construct digital logic circuits and to analyse their behaviour through real time simulation. Its intuitive, easy to use interface makes it the ideal choice for learning or teaching digital electronics.
15th	1st	Continue.
	2nd	Continue.

Signature of the Faculty