Government Polytechnic
Panchkula Sec-26
ElectricalEngg.Department

Lesson plan

Name of Faculty	Suchet Kumari
Discipline	**Electrical Engineering**
Semester	**4th**
Subject	**Digital Electronics**
Lesson Plan Duration	**March 2021**
Work load [Theory + Practical] Per Week	**[04+02]**

Week	Day	Theory Topic/ Assignment/ Test	No.	Practical
1st	1	Unit1: Introduction to Number Systems	1	Verification and interpretation of truth table for AND, OR, NOT, NAND, NOR, X-OR gates
	2	Decimal, binary number system		
	3	octal, hexa-decimal number system		
	4	BCD and ASCII code number systems and their inter-conversion		
2nd	1	Binary and Hexadecimal addition subtraction and multiplication	2	Construction of Half Adder/Full Adder using gates
	2	1's and 2's complement methods of addition		
	3	1's and 2's complement methods of subtraction		
	4	Class Test/Assignment		
3rd	1	Unit2: Gates Definition, symbol and truth tables for	3	Revision/Checking of Files
	2	inverter, OR, AND,		
	3	NAND,NOR		
	4	Draw AND,OR using NAND GATE and X-OR, exclusive-AND gates		
4th	1	Class Test/Assignment	4	To verify the truth table for JK flip flop
	2	Revision/Problem solution		
	3	Unit3: Introduction Boolean Algebra		
	4	Boolean Relations and their applications		
	5	De Morgan's Theorems		
5th	1	K-Map up to four variables	5	Construction and testing of any counter
	2	Numerical based on Demorgan's /Boolean relation		
	3	Numerical based on K-Map		
	4	Class Test/Assignment		
6th	1	Unit4: Combinational Circuits	6	Revision/Checking of Files
	2	Half adder, Full adder		
	3	Encoder, Decorder		
	4	Multiplexer/Demultiplexer		
7th	1	Introduction to Display Devices ; LED LCD and 7-segment display	7	Mid-term viva-voice
	2	Class Test/Assignment		
	3	Revision/Problem solution		
	4	Unit5: Introduction to Flip-Flops		
8th	1	J-K Flip-Flop R-S Flip-Flop	8	Verification of operation of a 8-bit D/A Converter
	2	D-Type Flip-Flop		
	3	T-Type Flip-Flop		
	4	Applications of Flip-Flops		

9th	1	Revision/Problem solution	9	Revision/Checking of Files
	2	Unit6: Introduction to Shift Registers		
	3	and Counters		
	4	Class Test/Assignment		
10th	1	Unit7: A/D and D/A Converters	10	Revision/Checking of Files
	2	A/D converter ,Counter ramp method		
	3	successive approximation method of A/D Conversion		
	4	D/A converters, Binary weighted method		
	5			
11th	1	R-2R D/A Converter method	11	Revision/Checking of Files
	2	Revision/Problem solution		
	3	Unit8:Semi-conductor Memories introduction		
	4	Types, merits, demerits and applications		
12th	1	Class Test/Assignment	12	Revision/Checking of Files
	2	Revision/Problem solution		
	3	Unit9 : introduction to Microprocessor		
	4	8085 microprocessor architecture pin configuration		
13th	1	Instruction set of 8085 microprocessor	13	Revision/Checking of Files
	2	Data transfer and arithmetical instructions		
	3	Instruction format		
	4	Addressing modes		
		Assembly language programmes including debugging.		
14th	1	Use of stacks and sub-routines in programming	14	Revision/Checking of Files
	2	Interfacing and data transfer between peripheral		
	3	I/O and microprocessor		
	4	Study of peripheral chips-		
15th	1	8251,8155	15	Revision/Checking of Files
	2	8051		
	3	8257		
	4	8259		
16th	1	Introduction of 16-bit, 32-bit microprocessor		
		their advantages over 8-bit microprocessor	16	Internal Practical
	2	Class Test/Assignment		
	3	Revision/Problem solution		
	4	Previous year HSBTE Question Paper Solution		