LESSON PLAN-2022-23 SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR		
DISCIPLINE-ETC	**Semester- 3RD**	**Name of teaching faculty-ER. SRIDHARA KUMAR RATH**
SUBJECT- DE	**No of days/ per week class alloted-5**	**SEM From date- 15/09/2022 No of weeks-16**
Week	**Class day**	**Theory Topics**
3RD	15.09.22	**Basics of Digital Electronics**
	16.09.22	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.
	17.09.22	Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1's & 2's complement of Binary numbers& Subtraction using complements method
	19.09.22	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes
	20.09.22	Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR--Symbol, Function, expression, truth table & timing diagram
	22.09.22	Universal Gates& its Realisation
	23.09.22	Boolean algebra, Boolean expressions, Demorgan's Theorems
	24.09.22	Represent Logic Expression: SOP & POS forms
5TH	26.09.22	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions
	27.09.22	**Combinational logic circuits**
	29.09.22	Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder
	30.09.22	Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit)
1ST	01.10.22	Seven segment Decoder (Definition, relevance, gate level of circuit Logic circuit, truth table, Applications of above)
2ND	05.10.22	**Sequential logic Circuits**
	07.10.22	Principle of flip-flops operation, its Types,
	08.10.22	SR Flip Flop using NAND,NOR Latch (un clocked)
3RD	10.10.22	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	11.10.22	Concept of Racing and how it can be avoided.
	13.10.22	**Registers, Memories & PLD**
	14.10.22	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out

	15.10.22	Universal shift registers-Applications.
4TH	17.10.22	Types of Counter & applications
	18.10.22	Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter.
	20.10.22	Concept of memories-RAM, ROM, static RAM, dynamic RAM,PS RAM
	21.10.22	Basic concept of PLD & applications
	22.10.22	**A/D and D/A Converters**
5TH	27.10.22	Necessity of A/D and D/A converters.
	28.10.22	D/A conversion using weighted resistors methods
	29.10.22	D/A conversion using R-2R ladder (Weighted resistors) network.
1ST	01.11.22	A/D conversion using counter method.
	03.11.22	A/D conversion using Successive approximate method
	04.11.22	**LOGIC FAMILIES**
	05.11.22	Various logic families &categories according to the IC fabrication process
2ND	10.11.22	2 Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with
	11.11.22	Features, circuit operation &various applications of TTL(NAND), CMOS (NAND & NOR)

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