LESSON PLAN-2021-22 (WINTER-2021)
SWAMI VIVEKANANDA SCHOOL OF ENGG & TECH, BBSR

Discipline-ETC	Semester-3rd	Name of teaching faculty-ER. JAYALAXMI DAS
SUBJECT-DIGITAL ELECTRONICS	*No of days/ per week class alloted-5*	*SEM From date- 01/10/2021* *No of weeks-16*
Week	**Class Day**	**Theory Topics**
1st	01.10.21	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.
	02.10.21	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.
2nd	04.10.21	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.
	05.10.21	Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1's & 2's complement of Binary numbers& Subtraction using complements method
	07.10.21	Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1's & 2's complement of Binary numbers& Subtraction using complements method
	08.10.21	Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1's & 2's complement of Binary numbers& Subtraction using complements method
	09.10.21	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes.
3rd	11.10.21	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes.
	21.10.21	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes.
	22.10.21	Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR--Symbol, Function, expression, truth table & timing diagram
	23.10.21	Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR--Symbol, Function, expression, truth table & timing diagram
4th	25.10.21	Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR--Symbol, Function, expression, truth table & timing diagram
	26.10.21	Universal Gates& its Realisation
	28.10.21	Universal Gates& its Realisation
	29.10.21	Universal Gates& its Realisation
	30.10.21	Boolean algebra, Boolean expressions, Demorgan's Theorems
1st	01.11.21	Represent Logic Expression: SOP & POS forms
	02.11.21	Represent Logic Expression: SOP & POS forms
	05.11.21	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions
	06.11.21	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions
2nd	08.11.21	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions
	09.11.21	Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder.
	11.11.21	Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder.
	12.11.21	Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder.
	13.11.21	Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit)

3rd	15.11.21	Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit)
	16.11.21	Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit)
	18.11.21	Seven segment Decoder (Definition, relevance, gate level of circuit Logic circuit, truth table, Applications of above)
	20.11.21	Principle of flip-flops operation, its Types,
4th	22.11.21	SR Flip Flop using NAND,NOR Latch (un clocked)
	23.11.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	25.11.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	26.11.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	27.11.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
5th	29.11.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	30.11.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
1st	02.12.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	03.12.21	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications
	04.12.21	Concept of Racing and how it can be avoided.
2nd	06.12.21	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out
	07.12.21	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out
	09.12.21	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out
	10.12.21	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out
	11.10.21	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out
3rd	13.12.21	Universal shift registers-Applications.
	14.12.21	Types of Counter & applications
	16.12.21	4 Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter.
	17.12.21	4 Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter.
	18.12.21	4 Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter.
4th	20.12.21	4 Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter.
	21.12.21	Concept of memories-RAM, ROM, static RAM, dynamic RAM,PS RAM
	23.12.21	Concept of memories-RAM, ROM, static RAM, dynamic RAM,PS RAM
	24.12.21	Necessity of A/D and D/A converters.
	25.12.21	D/A conversion using weighted resistors methods
5th	27.12.21	D/A conversion using R-2R ladder (Weighted resistors) network.
	28.12.21	A/D conversion using counter method.
	30.12.21	A/D conversion using Successive approximate method
	31.12.21	Various logic families &categories according to the IC fabrication process
	03.01.22	Various logic families &categories according to the IC fabrication process

Errors of an instrument & explain various types

1st	04.01.22	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families.
	06.01.22	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families.
	07.01.22	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families.
	08.01.22	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families.
2nd	10.01.22	3 Features, circuit operation &various applications of TTL(NAND), CMOS (NAND & NOR)
	11.01.22	3 Features, circuit operation &various applications of TTL(NAND), CMOS (NAND & NOR)
	13.01.22	3 Features, circuit operation &various applications of TTL(NAND), CMOS (NAND & NOR)
	14.01.22	3 Features, circuit operation &various applications of TTL(NAND), CMOS (NAND & NOR)

H.O.D.

PRINCIPAL

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