



UTKAL INSTITUTE OF ENGINEERING & TECHNOLOGY

DISCIPLINE: ETC	DISCIPLINE: 3 rd Sem	NAME OF THE TEACHING FACULTY: Er.Jyoti Prakash Swain		
SUBJECT: DIGITAL ELECTRONICS	No of Days/Per week class allotted: 4 Class P/W(60)	Semester From Date:15/09/2022 To Date:22/12/2022 No. Of Weeks: 15		
WEEK	WEEK	WEEK	REMARKS	
1 st	1 st	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.	Date	Dean/Principal
	2 nd	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.		
	3 rd	Number System-Binary, Octal, Decimal, Hexadecimal - Conversion from one system to another number system.		
	4 th	Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1's & 2's complement of Binary numbers& Subtraction using complements method		
2 nd	1 st	Arithmetic Operation-Addition, Subtraction, Multiplication, Division, 1's & 2's complement of Binary numbers& Subtraction using complements method		
	2 nd	Doubt Clear Class		
	3 rd	Doubt Clear Class		
	4 th	Doubt Clear Class		

3 rd	1 st	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes.		
	2 nd	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes.		
	3 rd	Digital Code & its application & distinguish between weighted & non-weight Code, Binary codes, excess-3 and Gray codes.		
	4 th	Logic gates: AND,OR,NOT,NAND,NOR, Exclusive-OR, Exclusive-NOR-- Symbol, Function, expression, truth table & timing diagram		
4 th	1 st	Revision of last few class		
	2 nd	Revision of last few class		
	3 rd			
	4 th	Universal Gates& its Realisation		
5 th	1 st	Universal Gates& its Realisation		
	2 nd	Boolean algebra, Boolean expressions, Demorgan's Theorems.		
	3 rd	Boolean algebra, Boolean expressions, Demorgan's Theorems.		
	4 th	Boolean algebra, Boolean expressions, Demorgan's Theorems.		
6 th	1 st	Revision of Last Class		
	2 nd	Revision of Last Class		
	3 rd	Represent Logic Expression: SOP & POS forms		
	4 th	Represent Logic Expression: SOP & POS forms		
	1 st	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions		

7 th	2 nd	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions		
	3 rd	Karnaugh map (3 & 4 Variables)&Minimization of logical expressions ,don't care conditions		
	4 th	Assignment		
8 th	1 st	Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder.		
	2 nd	Half adder, Full adder, Half Subtractor, Full Subtractor, Serial and Parallel Binary 4 bit adder.		
	3 rd	Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit)		
	4 th	Multiplexer (4:1), De- multiplexer (1:4), Decoder, Encoder, Digital comparator (3 Bit)		
9 th	1 st	Seven segment Decoder (Definition, relevance, gate level of circuit Logic circuit, truth table, Applications of above)		
	2 nd	Seven segment Decoder (Definition, relevance, gate level of circuit Logic circuit, truth table, Applications of above)		
	3 rd	Revision Class		
	4 th	Principle of flip-flops operation, its Types		
10 th	1 st	Principle of flip-flops operation, its Types		
	2 nd	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications		
	3 rd	C l o c k e d SR,D,JK,T,JK Master Slave flip-flops-Symbol, logic Circuit, truth table and applications		

	4 th	Concept of Racing and how it can be avoided		
11 th	1 st	Shift Registers-Serial in Serial -out, Serial- in Parallel-out, Parallel in serial out and Parallel in parallel out., Universal shift registers- Applications		
	2 nd	Class Test		
	3 rd	Binary counter, Asynchronous ripple counter (UP & DOWN), Decade counter. Synchronous counter, Ring Counter		
	4 th	Concept of memories-RAM, ROM, static RAM, dynamic RAM,PS RAM , Basic concept of PLD & applications		
12 th	1 st	Necessity of A/D and D/A converters		
	2 nd	D/A conversion using weighted resistors methods. 5.3 D/A conversion using R-2R ladder (Weighted resistors) network.		
	3 rd	conversion using counter method.		
	4 th	conversion using Successive approximate method		
13 th	1 st	Various logic families &categories according to the IC fabrication process		
	2 nd	Revision		
	3 rd	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families		
	4 th	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families		

14 th	1 st	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families		
	2 nd	Characteristics of Digital ICs- Propagation Delay, fan-out, fan-in, Power Dissipation ,Noise Margin ,Power Supply requirement &Speed with Reference to logic families		
	3 rd	Last class Discussion		
	4 th	Last class Discussion		
15 th	1 st	Last class Discussion		
	2 nd	Discussion Sample paper question		
	3 rd	Discussion Sample paper question		
	4 th	Discussion Sample paper question		

Syayyidul Kabir Sultana

HOD

Chittaranjan Parida

DEAN

[Signature]

PRINCIPAL