

## Lesson Plan

Name of Faculty: Yashvir Singh

Discipline: Computer Engg.

Semester: 3<sup>rd</sup>

Subject: Multimedia Application

Lesson plan duration: 15 Weeks (from Oct 2021 to Jan 2022) Theory-3hrs, Practical-6hrs.

Week	Theory		Practical	
1 <sup>st</sup> week	1 <sup>st</sup> day	Concept of Multimedia	1 <sup>st</sup> day(G1)	Installation of various multimedia software like Photoshop, Flash, Director or any open source software
			1 <sup>st</sup> day(G2)	Installation of various multimedia software like Photoshop, Flash, Director or any open source software
	2 <sup>nd</sup> day	History of Multimedia	2 <sup>nd</sup> day(G1)	Installing and use of various multimedia devices  Scanner Digital camera, web camera
2 <sup>nd</sup> week	3 <sup>rd</sup> day	Multi media hardware and software-various classes	2 <sup>nd</sup> day(G2)	Installing and use of various multimedia devices  Scanner Digital camera, web camera
	4 <sup>th</sup> day	components	1 <sup>st</sup> day(G1)	Installing and use of various multimedia devices Mike and speakers Touch screen
			1 <sup>st</sup> day(G2)	Installing and use of various multimedia devices Mike and speakers Touch screen
5 <sup>th</sup> day	Quality criteria and specifications of different capturing devices	2 <sup>nd</sup> day(G1)	Installing and use of various multimedia devices Plotter and printers DVD Audio CD and Video CD	
3 <sup>rd</sup> week	6 <sup>th</sup> day	Communication devices	2 <sup>nd</sup> day(G2)	Plotter and printers DVD Audio CD and Video CD
	7 <sup>th</sup> day	Storage devices	1 <sup>st</sup> day(G1)	Reading and writing of different format on CD/DVD

			1 <sup>st</sup> day(G2)	Reading and writing of different format on CD/DVD
	8 <sup>th</sup> day	Display devices	2 <sup>nd</sup> day(G1)	Practical Exam and viva
	9 <sup>th</sup> day	Elements of Multimedia and different multimedia file formats	2 <sup>nd</sup> day(G2)	Practical Exam and viva
4 <sup>th</sup> week	10 <sup>th</sup> day	Applications of multimedia – benefits and problems	1 <sup>st</sup> day(G1)	Transporting audio and video files
	11 <sup>th</sup> day	revision	1 <sup>st</sup> day(G2)	Transporting audio and video files
	12 <sup>th</sup> day	Assignment	2 <sup>nd</sup> day(G1)	Using various features of Flash
			2 <sup>nd</sup> day(G2)	Using various features of Flash
5 <sup>th</sup> week	13 <sup>th</sup> day	Planning steps and process	1 <sup>st</sup> day(G1)	Continue Using various features of Flash
			1 <sup>st</sup> day(G2)	Continue Using various features of Flash
	14 <sup>th</sup> day	Concept of data compression	2 <sup>nd</sup> day(G1)	Practical Exam and Viva
	15 <sup>th</sup> day	Text encoding	2 <sup>nd</sup> day(G2)	Practical Exam and Viva
6 <sup>th</sup> week	16 <sup>th</sup> day	Audio encoding techniques	1 <sup>st</sup> day(G1)	Using various features of Photo-shop/GIMP
	17 <sup>th</sup> day	Types of images	1 <sup>st</sup> day(G2)	Using various features of Photo-shop/GIMP
	18 <sup>th</sup> day	Capturing images using camera/scanner	2 <sup>nd</sup> day(G1)	Continue Using various features of Photo-shop/GIMP
			2 <sup>nd</sup> day(G2)	Continue Using various features of Photo-shop/GIMP
7 <sup>th</sup> week	19 <sup>th</sup> day	coding techniques for Moving Images	1 <sup>st</sup> day(G1)	Continue Using various features of Photo-shop/GIMP
			1 <sup>st</sup> day(G2)	Continue Using various features of Photo-shop/GIMP
	20 <sup>th</sup> day	Editing , Editing of images audio, text	2 <sup>nd</sup> day(G1)	Continue Using various features of Photo-shop/GIMP
	21 <sup>st</sup> day	Editing video and graphics, navigation and user interface designing	2 <sup>nd</sup> day(G2)	Continue Using various features of Photo-shop/GIMP

8 <sup>th</sup> week	22 <sup>nd</sup> day	Use of various codes like bar code	1 <sup>st</sup> day(G1)	Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations.
			1 <sup>st</sup> day(G2)	Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations.
	23 <sup>rd</sup> day	QR code in multimedia applications.	2 <sup>nd</sup> day(G1)	Continue Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations.
	24 <sup>th</sup> day	Revision and assignment	2 <sup>nd</sup> day(G2)	Continue Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations.
9 <sup>th</sup> week	25 <sup>th</sup> day	Photo-shop workshop, image editing tools	1 <sup>st</sup> day(G1)	Continue Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations.
			1 <sup>st</sup> day(G2)	Continue Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations.
	26 <sup>th</sup> day	specifying and adjusting colors	2 <sup>nd</sup> day(G1)	Continue Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations
	27 <sup>th</sup> day	using gradient tools	2 <sup>nd</sup> day(G2)	Continue Making multimedia presentations combining, Flash, Photo-shop, such as department profile, lesson presentation, games and project presentations
10 <sup>th</sup> week	28 <sup>th</sup> day	selection and move tools	1 <sup>st</sup> day(G1)	Revision and test
			1 <sup>st</sup> day(G2)	Revision and test
	29 <sup>th</sup> day	transforming path drawing and editing tools	2 <sup>nd</sup> day(G1)	Practical Exam and viva

	30 <sup>th</sup> day	using channels, layers	2 <sup>nd</sup> day(G2)	Practical Exam and viva
11 <sup>th</sup> week	31 <sup>st</sup> day	filters and actions	1 <sup>st</sup> day(G1)	Generation and recognition of bar code & QR code using pre built application/mobile applications.
			1 <sup>st</sup> day(G2)	Generation and recognition of bar code & QR code using pre built application/mobile applications.
	32 <sup>nd</sup> day	Trevison and assignment	2 <sup>nd</sup> day(G1)	Continue Generation and recognition of bar code & QR code using pre built application/mobile applications.
	33 <sup>rd</sup> day	Types of Authoring programmes – Icon based	2 <sup>nd</sup> day(G2)	Continue Generation and recognition of bar code & QR code using pre built application/mobile applications.
12 <sup>th</sup> week	34 <sup>th</sup> day	Time based	1 <sup>st</sup> day(G1)	Continue Generation and recognition of bar code & QR code using pre built application/mobile applications.
			1 <sup>st</sup> day(G2)	Continue Generation and recognition of bar code & QR code using pre built application/mobile applications.
	35 <sup>th</sup> day	Story boarding/scripting and object oriented working in macromedia flash	2 <sup>nd</sup> day(G1)	Practical Exam and Viva
	36 <sup>th</sup> day	exploring interface using selection of PEN tools	2 <sup>nd</sup> day(G2)	Practical Exam and Viva
13 <sup>th</sup> week	37 <sup>th</sup> day	Working with drawing and painting tools	1 <sup>st</sup> day(G1)	Software installation, operation, development and viva-voce
			1 <sup>st</sup> day(G2)	Software installation, operation, development and viva-voce
	38 <sup>th</sup> day	applying colour viewing and manipulating time line	2 <sup>nd</sup> day(G1)	Software installation, operation, development and viva-voce
	39 <sup>th</sup> day	animating	2 <sup>nd</sup> day(G2)	Software installation, operation, development and viva-voce
14 <sup>th</sup> week	40 <sup>th</sup> day	processing, guiding layers	1 <sup>st</sup> day(G1)	Software installation, operation, development and viva-voce

			1 <sup>st</sup> day(G2)	Software installation, operation, development and viva-voce
	41 <sup>th</sup> day	importing and editing sound and video clips in flash	1 <sup>st</sup> day(G1)	Practical Exam and Viva
	42 <sup>nd</sup> day	Revision and assignment	2 <sup>nd</sup> day(G2)	Practical Exam and Viva
15 <sup>th</sup> week	43 <sup>rd</sup> day	Revision	1 <sup>st</sup> day(G1)	Revision
	44 <sup>th</sup> day	Revision	1 <sup>st</sup> day(G2)	Revision
			2 <sup>nd</sup> day(G1)	Revision
	45 <sup>th</sup> day	Revision	2 <sup>nd</sup> day(G2)	Revision

## Government Polytechnic, Jhajjar

### Lesson Plan (Odd Semester)

Name of the Faculty : Reenu  
 Discipline : Computer Engineering  
 Semester : 3rd  
 Subject : Data Communication  
 Lesson Plan Duration : 15 weeks (from Oct 2021 to Jan 2022)

Week	Theory		Practical	
	Lecture Day	Topic (Including Assignment / Test)	Practical Day	Topic
1 <sup>st</sup>	1 <sup>st</sup>	<b>Introduction</b> : Data Communication- Components	NA	NA
	2 <sup>nd</sup>	Data representation	NA	NA
	3 <sup>rd</sup>	Data flow Networks	NA	NA
	4 <sup>th</sup>	Distributed processing	NA	NA
2 <sup>nd</sup>	1 <sup>st</sup>	Network criteria Physical structures	NA	NA
	2 <sup>nd</sup>	Network Category- LAN	NA	NA
	3 <sup>rd</sup>	WAN, MAN	NA	NA
	4 <sup>th</sup>	<b>Data and Signals</b> : Analog and Digital data	NA	NA
3 <sup>rd</sup>	1 <sup>st</sup>	Analog and digital signals	NA	NA
	2 <sup>nd</sup>	Periodic and Non Periodic signals	NA	NA
	3 <sup>rd</sup>	periodic analog signals	NA	NA
	4 <sup>th</sup>	Digital Signals- Bit rate, Bit length	NA	NA
4 <sup>th</sup>	1 <sup>st</sup>	Digital signal as a composite analog signal	NA	NA
	2 <sup>nd</sup>	Transmission of digital signals	NA	NA
	3 <sup>rd</sup>	Transmission Impairment- Attenuation, Distortion and noise	NA	NA
	4 <sup>th</sup>	Performance- bandwidth, throughput	NA	NA
5 <sup>th</sup>	1 <sup>st</sup>	Latency, jitter	NA	NA
	2 <sup>nd</sup>	Revision	NA	NA
	3 <sup>rd</sup>	<b>Digital and Analog Transmission</b> : Analog	NA	NA
	4 <sup>th</sup>	PSK, FSK	NA	NA

6 <sup>th</sup>	1 <sup>st</sup>	Analog to Analog Conversion- AM	NA	NA
	2 <sup>nd</sup>	PM,FM( No mathematical treatment)	NA	NA
	3 <sup>rd</sup>	Digital transmission- Digital to digital conversion- coding and schemes	NA	NA
	4 <sup>th</sup>	Digital transmission- Digital to digital conversion- coding and schemes	NA	NA
7 <sup>th</sup>	1 <sup>st</sup>	Analog to digital conversion- PCM	NA	NA
	2 <sup>nd</sup>	Delta Modulation (DM)	NA	NA
	3 <sup>rd</sup>	Transmission modes- Serial transmission	NA	NA
	4 <sup>th</sup>	Transmission modes- parallel transmission	NA	NA

8 <sup>th</sup>	1 <sup>st</sup>	Revision	NA	NA
	2 <sup>nd</sup>	Revision	NA	NA
	3 <sup>rd</sup>	<b>Multiplexing – FDM</b>	NA	NA
	4 <sup>th</sup>	FDM	NA	NA
9 <sup>th</sup>	1 <sup>st</sup>	WDM	NA	NA
	2 <sup>nd</sup>	WDM	NA	NA
	3 <sup>rd</sup>	TDM	NA	NA
	4 <sup>th</sup>	TDM	NA	NA
10 <sup>th</sup>	1 <sup>st</sup>	Revision	NA	NA
	2 <sup>nd</sup>	Revision	NA	NA
	3 <sup>rd</sup>	<b>Transmission media:</b> Guided media	NA	NA
	4 <sup>th</sup>	Twisted pair cable	NA	NA
11 <sup>th</sup>	1 <sup>st</sup>	Twisted pair cable	NA	NA
	2 <sup>nd</sup>	Co-axial cable	NA	NA
	3 <sup>rd</sup>	Co-axial cable	NA	NA
	4 <sup>th</sup>	Fibre optics cable	NA	NA
12 <sup>th</sup>	1 <sup>st</sup>	Fibre optics cable	NA	NA
	2 <sup>nd</sup>	Unguided Media	NA	NA
	3 <sup>rd</sup>	Radio wave	NA	NA
	4 <sup>th</sup>	Microwave	NA	NA
13 <sup>th</sup>	1 <sup>st</sup>	Infrared	NA	NA
	2 <sup>nd</sup>	Revision	NA	NA
	3 <sup>rd</sup>	<b>Error Detection and Correction</b> : Types of Errors	NA	NA
	4 <sup>th</sup>	Redundancy	NA	NA
14 <sup>th</sup>	1 <sup>st</sup>	Detection v/s correction	NA	NA
	2 <sup>nd</sup>	Forward error correction	NA	NA
	3 <sup>rd</sup>	Forward error correction v/s retransmission	NA	NA
	4 <sup>th</sup>	Forward error correction v/s retransmission	NA	NA
15 <sup>th</sup>	1 <sup>st</sup>	Block parity to detect	NA	NA

(Signature of the teacher concerned with date)

## Lesson Plan

Name of Faculty: Rekha Jangir

Discipline : Computer Engg.

Semester : 3<sup>rd</sup>

Subject : Operating System

Lesson plan duration : 15 Weeks(Octr 2021 to Jan 2022)

Week	Theory		Practical	
	Lecture	Topic (including assignments /tests)	Practical	Topic
	1 <sup>st</sup>	Unit:1 Introduction to system software		Demonstration of all the controls provided on control panel
	2 <sup>nd</sup>	Compiler(definition , why we use compiler , importance of it)		
	3 <sup>rd</sup>	Assembler(object code , destination		
	4 <sup>th</sup>	Difference between loader, assembler and compiler		
Week 2	1 <sup>st</sup>	What is operating system and types of os	1 <sup>st</sup>	Exercises involving various internal and external DOS commands
	2 <sup>nd</sup>	Main features of operating system		
	3 <sup>rd</sup>	Importants of operating system , why we use our.		
	4 <sup>th</sup>	Revision		
Week 3	1 <sup>st</sup>	Mock Test	1 <sup>st</sup>	Exercises involving various internal and external DOS commands
	2 <sup>nd</sup>	Unit:2 Brief introduction to ms- dos, windows and linux		
	3 <sup>rd</sup>	Brief history of DOS and Windows		
	4 <sup>th</sup>	Main features of DOS		
Week4	1 <sup>st</sup>	Directory structure of DOS	2 <sup>nd</sup>	Exercises involving of basics of windows
	2 <sup>nd</sup>	File structure of DOS		
	3 <sup>rd</sup>	Detail concept of DOS commands		
	4 <sup>th</sup>	Introduction to windows and Linux.R Revision of unit 2		

Week 5	1 <sup>st</sup>	Mock Test	1 <sup>st</sup>	Exercise on window operating system.
	2 <sup>nd</sup>	Unit: Overview of operating system- Definition of operating system and function of operating system		
	3 <sup>rd</sup>	Types of operating system:- single user	2 <sup>nd</sup>	
	4 <sup>th</sup>	Network operating system and Distributed operating system		
Week 6	1 <sup>st</sup>	Storage structure:- I/O structure , Caching.	1 <sup>st</sup>	Practice
	2 <sup>nd</sup>	Class test		
	3 <sup>rd</sup>	Revision of chapter	2 <sup>nd</sup>	Exercise on window operating system.
	4 <sup>th</sup>	Mock Test		
Week 7	1 <sup>st</sup>	Unit:-4	1 <sup>st</sup>	Practice
	2 <sup>nd</sup>	4.1) process management function:-		
	3 <sup>rd</sup>	Scheduling algorithms , process synchronization	2 <sup>nd</sup>	Practice
	4 <sup>th</sup>	Deadlocks- characterization , methods for handling deadlock		
	1 <sup>st</sup>	Deadlock avoidance , banker's algorithm	1 <sup>st</sup>	Exercises on basic commands of Linux operating system.
	2 <sup>nd</sup>	Deadlock prevention , recover from deadlock.		
Week 08	3 <sup>rd</sup>	Revision of chapter		Exercises on basic commands of Linux operating system.
	4 <sup>th</sup>	Assignment		
Week 09	1 <sup>st</sup>	Test	1 <sup>st</sup>	Exercises on basic commands of Linux operating system.
	2 <sup>nd</sup>	4.2) Memory management function:-		

		Introduction, single process system		
	3 <sup>rd</sup>	Fixed partition memory , paging	2 <sup>nd</sup>	Exercises on basic commands of Linux operating system.
	4 <sup>th</sup>	Segmentation , swaping		
Week 10	1 <sup>st</sup>	Fragmentation , demand paging	1 <sup>st</sup>	Practice
	2 <sup>nd</sup>	Virtual memory management	2 <sup>nd</sup>	
	3 <sup>rd</sup>	Assignment		
	4 <sup>th</sup>	Test		
Week 11	1 <sup>st</sup>	4.3) I/O management function	1 <sup>st</sup>	Practice
	2 <sup>nd</sup>	Dedicated devices		
	3 <sup>rd</sup>	Shared devices with example	2 <sup>nd</sup>	
	4 <sup>th</sup>	Simple problem on the above topic		
Week 12	1 <sup>st</sup>	I/O devices , storage devices		Exercise on shell programming on linux
	2 <sup>nd</sup>	Buffering , spoofing		
	3 <sup>rd</sup>	Revision of chapter	2 <sup>nd</sup>	Exercise on shell programming onlinux
	4 <sup>th</sup>	Assignment		
Week 13	1 <sup>st</sup>	4.4) File management :- file concept , file attributes	1 <sup>st</sup>	Exercise on shell programming on linux
	2 <sup>nd</sup>	Types of file and operation of files		
	3 <sup>rd</sup>	Problem solved on above topics	2 <sup>nd</sup>	Exercise on shell programming on
	4 <sup>th</sup>	Access method of file		
Week 14	1 <sup>st</sup>	Definition of file , types and brief	1 <sup>st</sup>	Exercise on shell programming on
	2 <sup>nd</sup>	Assignment		
	3 <sup>rd</sup>	Directory structure and working of	2 <sup>nd</sup>	Practice
	4 <sup>th</sup>	Free space management		
	1 <sup>st</sup>	Details concept of FSM	1 <sup>st</sup>	Practice
	2 <sup>nd</sup>	Differentiate accessing methods of file.		

Week 15				
	3 <sup>rd</sup>	Revision of unit 4	2 <sup>nd</sup>	Practice
	4 <sup>th</sup>	Mock Test		

## Lesson Plan

Name of the Faculty : Smt. Rekha Jangir  
 Discipline : Computer Engg.  
 Semester : 3rd  
 Subject : PROGRAMMING IN C  
 Lesson plan duration : 15 weeks (from Oct 2021 to Jan 2022) 3L+6Lab

Week	Theory		
	Lecture Day	Topic (including assignments /tests)	
1 <sup>st</sup> Week	1 <sup>st</sup>	PROGRAMMING IN C:	1. Programming exercises on executing and editing a C program. G1
	2 <sup>nd</sup>	Overview of PROGRAMMING IN C	2. Programming exercises on defining variables and assigning values to variables G2
	3 <sup>rd</sup>	Algorithm and Programming Development	1. Programming exercises on executing and editing a C program. G1 2. Programming exercises on defining variables and assigning values to variables G2
Week 2	1 <sup>st</sup>	Steps in development of a program	3. Programming exercises on arithmetic and relational operators
	2 <sup>nd</sup>	Flow charts .	4. Programming exercises on arithmetic expressions and their evaluation
	3 <sup>rd</sup>	<b>Algorithm development , Programme Debugging</b>	3. Programming exercises on arithmetic and relational operators 4. Programming exercises on arithmetic expressions and their evaluation
Week 3	1 <sup>st</sup>	Program Structure	5. Programming exercises on formatting input/output using printf and scanf and their return type values
	2 <sup>nd</sup>	I/O statements, assign statements	6. Programming exercises using if statement
	3 <sup>rd</sup>	Constants, variables and data types	5. Programming exercises on formatting input/output using printf and scanf and their return type values 6. Programming exercises using if statement
Week 4	1 <sup>st</sup>	Operators and Expressions.	7. Programming exercises using if – Else.
	2 <sup>nd</sup>	Unformatted and Formatted IOS	8. Programming exercises on switch statement
	3 <sup>rd</sup>	Data Type Casting	7. Programming exercises using if – Else. 8. Programming exercises on switch statement
Week 5	1 <sup>st</sup>	<b>Control Structures</b>	9. Programming exercises on do – while, statement
	2 <sup>nd</sup>	Introduction	10. Programming exercises on for – statement

	3 <sup>rd</sup>	Decision making with IF – statement	9. Programming exercises on do – while, statement 10. Programming exercises on for – statement
Week 6	1 <sup>st</sup>	IF – Else and Nested IF	11. Simple programs using pointers
	2 <sup>nd</sup>	While and do-while, for loop	12. Programs on one-dimensional array
	3 <sup>rd</sup>	Break. Continue, goto and switch statements	11. Simple programs using pointers 12. Programs on one-dimensional array
Week 7	1 <sup>st</sup>	<b>Pointers</b>	13 Programs on two-dimensional array.
	2 <sup>nd</sup>	Introduction to pointers	14 (i) Programs for putting two strings together
	3 <sup>rd</sup>	Address operator and pointers	13 Programs on two-dimensional array. 14 (i) Programs for putting two strings together
Week 8	1 <sup>st</sup>	Declaring and initializing pointers,	14 (ii) Programs for comparing two strings
	2 <sup>nd</sup>	Single pointer,	15. Simple programs using functions
	3 <sup>rd</sup>	Assignment	14 (ii) Programs for comparing two strings 15. Simple programs using functions
Week 9	1 <sup>st</sup>	<b>Functions</b>	16. Simple programs using structures
	2 <sup>nd</sup>	Introduction to functions	17. Simple programs using union
	3 <sup>rd</sup>	Global and Local Variables	16. Simple programs using structures 17. Simple programs using union
Week 10	1 <sup>st</sup>	Function Declaration	REVISIONS
	2 <sup>nd</sup>	Standard functions	
	3 <sup>rd</sup>	Parameters and Parameter Passing , Call - by value/reference	
Week 11	1 <sup>st</sup>	Introduction to Arrays	
	2 <sup>nd</sup>	Array Declaration, Length of array	
	3 <sup>rd</sup>	Single and Multidimensional Array.	
Week 12	1 <sup>st</sup>	<b>Arrays of characters</b>	
	2 <sup>nd</sup>	Introduction of Strings	
	3 <sup>rd</sup>	String declaration and definition	
Week 13	1 <sup>st</sup>	String Related function i.e. strlen, strcpy, strcmp	
	2 <sup>nd</sup>	Passing an array to function	
	3 <sup>rd</sup>	<b>Structures and Unions</b>	

Week 14	1 <sup>st</sup>	Declaration of structures	
	2 <sup>nd</sup>	Accessing structure members	
	3 <sup>rd</sup>	Structure Initialization	
Week 15	1 <sup>st</sup>	Pointer to a structures,	
	2 <sup>nd</sup>	Unions	
	3 <sup>rd</sup>	<b>Revision</b>	

Name of Subject : Digital Electronics

Semester : 3<sup>rd</sup>

Name of faculty : Vivek Dahiya

Branch : computer

Week	Lecture	Name of Topic	Experiment
1st	1 <sup>st</sup>	Introduction to Digital Electronics, Distinction between analog and digital signal.	Introduction with digital Lab equipments
	2 <sup>nd</sup>	Applications and advantages of digital signals	
	3 <sup>rd</sup>	Binary, octal and hexadecimal number system: conversion from decimal and hexadecimal to binary and vice-versa.	
2nd	4th	Binary addition and subtraction including binary points. 1's and 2's complement method of addition/subtraction.	Verification and interpretation of truth tables for AND, OR, NOT NAND, NOR and Exclusive OR (EXOR) and Exclusive NOR(EXNOR) gates
	5th	Concept of code, weighted and non-weighted codes, examples of 8421, BCD, excess-3 and Gray code.	
	6th	Concept of parity, single and double parity and error detection.	
3rd	7th	Concept of negative and positive logic	Realisation of logic functions with the help of NAND or NOR gates
	8th	Definition, symbols and truth tables of NOT, AND, OR, NAND, NOR, EXOR Gates,	
	9th	NAND and NOR as universal gates.	
4 <sup>th</sup>	10th	Introduction to TTL and CMOS logic families	Practical checking and viva-voce
	11th	Revision	
	12 <sup>th</sup>	Logic simplification	
5 <sup>th</sup>	13 <sup>th</sup>	Postulates of Boolean algebra, De Morgan's Theorems.	To design a half adder using XOR and NAND gates and verification of its operation
	14 <sup>th</sup>	Implementation of Boolean (logic) equation with gates	
	15th	Karnaugh map (upto 4 variables) and simple application in developing combinational logic circuits.	
6th	16 <sup>th</sup>	Test and assignment	Construction of a full adder circuit using XOR and NAND gates and verify its operation
	17th	K-Map Practice	
	18 <sup>th</sup>	Half adder, design and implementation.	
7 <sup>th</sup>	19th	and Full adder circuit , design and implementation and 4 bit adder circuit	Verification of truth table for encoder and decoder ICs, Mux and

			De-Mux
	20 <sup>th</sup>	Basic functions and block diagram of MUX and DEMUX with different ICs.	
	21 <sup>st</sup>	Four bit decoder circuits for 7 segment display and decoder/driver ICs.	
8th	22 <sup>nd</sup>	Basic functions and block diagram of Encoder	Practical checking and viva-voce
	23 <sup>rd</sup>	Concept and types of latch with their working and applications	
	24 <sup>th</sup>	Difference between a latch and a flip flop	
9th	25 <sup>th</sup>	Operation using waveforms and truth tables of RS, T, D,	Verification of truth table for positive edge triggered, negative edge triggered, level triggered IC flip-flops (At least one IC each of D latch, D flip-flop, JK flip-flops).
	26 <sup>th</sup>	Master/Slave JK flip flops.	
	27 <sup>th</sup>	Introduction to Asynchronous and Synchronous counters.	
10th	28 <sup>th</sup>	Binary counters	Use of Asynchronous Counter ICs (7490 or 7493)
	29 <sup>th</sup>	Divide by N ripple counters.	
	30 <sup>th</sup>	Decade counter.	
11 <sup>th</sup>	31 <sup>st</sup>	Ring counter	
	32 <sup>nd</sup>	Revision	
	33 <sup>rd</sup>	Test and assignment	
12th	34 <sup>th</sup>	Introduction and basic concepts including shift left and shift right. Serial in parallel out, serial in serial out,	To design a 4 bit ring counter and verify its operation.
	35 <sup>th</sup>	parallel in serial out, parallel in parallel out.	
	36 <sup>th</sup>	Universal shift register	
13 <sup>th</sup>	37 <sup>th</sup>	Working principle of A/D and D/A converters Brief idea about different techniques of A/D conversion	To design a 4 bit SISO, SIPO, PISO, PIPO shift registers using JK/D flip flops and verification of their operation
	38 <sup>th</sup>	Detail study of Binary Weighted D/A converter.	
	39 <sup>th</sup>	R/2R ladder D/A converter	
14 <sup>th</sup>	40 <sup>th</sup>	Stair step Ramp A/D converter, Dual Slope A/D converter	Viva
	41 <sup>st</sup>	Successive Approximation A/D Converter Applications of A/D and D/A converter.	
	42 <sup>nd</sup>	Memory organization,.	
15th	43 <sup>rd</sup>	classification of semiconductor memories (RAM, ROM, PROM, EPROM, EEPROM), static and dynamic RAM,	Viva
	44 <sup>th</sup>	Introduction to 74181 ALU IC	
	45 <sup>th</sup>	Test and assignment	

	3 <sup>rd</sup>	Structures and Unions
Week 14	1 <sup>st</sup>	Declaration of structures
	2 <sup>nd</sup>	Accessing structure members
	3 <sup>rd</sup>	Structure Initialization
Week 15	1 <sup>st</sup>	Pointer to a structures,
	2 <sup>nd</sup>	Unions
	3 <sup>rd</sup>	<b>Revision</b>

