INFORMATION TECHNOLOGY DEPARTMENT

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Mr. Rabi Kumar Darji	**Course Name:** CSA
Course No.: Th.1	**Branch:** IT
Program: Diploma	**Session: 2024- 25**
Year / Sem: II/ III	

Sl. No.	Period /Class	Time (min)	Unit	Topic to be covered	Teaching method
1.	1.	55	1	Introduction to Computer Architecture	Green Board
2.	2.	55	1	Basic Structure of Computer Hardware	Green Board
3.	3.	55	1	Components of Computer Hardware	PPT
4.	4.	55	1	Functional Units	Green Board
5.	5.	55	1	Performance Measures	NPTEL VIDEO
6.	6.	55	1	Performance Measures	Green Board
7.	7.	55	1	Revision of Chapter 1	Questionnaires & Quiz
8.	8.	55	1	Old Question Discussion	Green Board
9.	9.	55	1	Old Question Task & Doubt	Green Board
10.	10.	55	2	Introduction to Instruction Format	Green Board
11.	11.	55	2	Fundamentals to Instructions	Green Board
12.	12.	55	2	Opcode & Operands	Green Board
13.	13.	55	2	Types of Instruction	NPTEL VIDEO
14.	14.	55	2	Types of Instruction	Green Board
15.	15.	55	2	Addressing Modes	Green Board
16.	16.	55	2	Programs using Different Instruction	Green Board
17.	17.	55	2	Revision of Chapter 2	Questionnaires & Quiz
18.	18.	55	2	Old Question Discussion	Green Board
19.	19.	55	3	Introduction to Processor System	PPT
20.	20.	55	3	Registers and Types of Registers	Green Board
21.	21.	55	3	Instruction Execution	NPTEL VIDEO
22.	22.	55	3	Instruction Execution	Green Board
23.	23.	55	3	Control Unit and its type	Green Board
24.	24.	55	3	Hardwired Control Unit	Green Board
25.	25.	55	3	Microprogrammed Control Unit	Green Board
26.	26.	55	3	Revision of Chapter 3	Questionnaires & Quiz
27.	27.	55	3	Old Question Discussion	Green Board
28.	28.	55	4	Memory System Organization	Green Board
29.	29.	55	4	Memory characteristics	Green Board
30.	30.	55	4	Memory hierarchy	PPT
31.	31.	55	4	Type and Structure of RAM and ROM	Green Board
32.	32.	55	4	Cache Memory and its policies	Green Board
33.	33.	55	4	Cache Memory Mapping Technique	NPTEL VIDEO
34.	34.	55	4	Cache Memory Mapping Technique	Green Board

35.	35.	55	4	Numerical on Cache Memory Mapping	Green Board
36.	36.	55	4	Secondary Memory and its Structure	PPT
37.	37.	55	4	Virtual Memory	Green Board
38.	38.	55	4	Revision of Chapter 4	Questionnaires & Quiz
39.	39.	55	4	Old Question Discussion	Green Board
40.	40.	55	5	Input-Output System	Green Board
41.	41.	55	5	Programmed I/O and Interrupt-initiated I/O	PPT
42.	42.	55	5	Direct Memory Access (DMA)	NPTEL VIDEO
43.	43.	55	5	Input-Output Processor	Green Board
44.	44.	55	5	Revision of Chapter 5	Questionnaires & Quiz
45.	45.	55	5	Old Question Discussion	Green Board
46.	46.	55	6	Introduction to Bus and System Bus	Green Board
47.	47.	55	6	Types of System Bus	Green Board
48.	48.	55	6	Structure of Bus	NPTEL VIDEO
49.	49.	55	6	Parameter to Design Bus	PPT
50.	50.	55	6	Revision of Chapter 6	Questionnaires & Quiz
51.	51.	55	6	Old Question Discussion	Green Board
52.	52.	55	7	Parallel Processing	Green Board
53.	53.	55	7	Pipelining and its Type	Green Board
54.	54.	55	7	Pipelining and its Type	Green Board
55.	55.	55	7	Arithmetic Pipeline and Instruction Pipeline	NPTEL VIDEO
56.	56.	55	7	Multiprocessors and its Characteristics	PPT
57.	57.	55	7	Flynn's Classification of Multiprocessor	NPTEL VIDEO
58.	58.	55	7	Flynn's Classification of Multiprocessor	Green Board
59.	59.	55	7	Revision of Chapter 6	Questionnaires & Quiz
60.	60.	55	7	Old Question Discussion	Green Board

REFERENCES

Sl. No.	***Name of Authors***	***Title of the Book***	***Name of the Publisher***
TB1	Morris Mano	Computer System Architecture, Third Edition	Pearson
RB1	Er. Rajeev Chopra	Computer Architecture and Organization	S. Chand

LESSON PLAN

JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: **Subrata Parida**	Academic Year: 2024- 25
Course No.: Th 2 (**Data Structures**)	Course name: INFORMATION TECHNOLOGY
Program: Diploma	Branch: I.T.
Year/Sem: 3RD	Section: NA

Sl. No.	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1	1	55 min	1	Explain Data, Information, data types Define data structure & explain different operations	Black board
2	2	55min	1	Explain Abstract data types Discuss Algorithm & its complexity Explain Time, space tradeoff	Black board
3	3	55min	3	Give Introduction about array Discuss Linear arrays, representation of linear array In memory	Black board
4	4	55min	3	Explain traversing linear arrays, inserting & deleting elements	Black board
5	5	55min	3	Explain traversing linear arrays, inserting & deleting elements	PPT
6	6	55min	3	Discuss multidimensional arrays, representation of two-dimensional arrays in memory (row major order & column major order),	PPT
7	7	55min	3	Discuss multidimensional arrays, representation of two-dimensional arrays in memory (row major order & column major order),	PPT
8	8	55min	3	sparse matrices.	Black board
9	9	55min	3	Pointer	Black board
10	10	55min	3	Explain Basic Terminology, Storing Strings	Black board

				State Character Data Type,	
11	11	55min	3	Discuss String Operations	Black board
12	12	55 min	3	Give fundamental idea about Stacks and queues	Black board
13	13	55 min	4	Explain array representation of Stack	Black board
14	14	55min	4	Explain array representation of Queue	Black board
15	15	55 min	4	Explain arithmetic expression, polish notation & Conversion	PPT
16	16	55 min	4	Explain arithmetic expression, polish notation &Conversion	Black board
17	17	55min	4	Discuss queues, circular queue, priority queues.	Black board
18	18	55min	4	Discuss queues, circular queue, priority queues.	Black board
19	19	55 min	4	Quiz test	PPT
20	20	55 min	5	Give Introduction about linked list	Black board
21	21	55 min	5	Explain representation of linked list in memory	Black board
22	22	55 min	5	Explain representation of linked list in memory	Black board
23	23	55min	5	Discuss traversing a linked list, searching,	Black board
24	24	55min	5	Discuss garbage collection.	Black board
25	25	55 min	5	Explain Insertion into a linked list, Deletion from a linked list, header linked list	Black board
26	26	55 min	5	Explain Insertion into a linked list, Deletion from a linked list, header linked list	Black board
27	27	55 min	5	Explain Insertion into a linked list, Deletion from a linked list, header linked list	Black board
28	28	55 min	5	Quiz	PPT
29	29	55 min	6	Explain Basic terminology of Tree	Black board
30	30	55 min	6	Discuss Binary tree, its representation and traversal, binary search tree, searching,	Projector
31	31	55 min	6	Discuss Binary tree, its representation and traversal, binary search tree, searching,	Projector
32	32	55 min	6	Explain insertion & deletion in a binary search tree	PPT
32	32	55 min	6	Explain insertion & deletion in a binary search tree	Black board

33	33	55 min	6	Quiz	Projector
34	34	55 min	7	Explain graph terminology & its representation,	Projector
35	35	55 min	7	Explain graph terminology & its representation,	Black board
36	36	55 min	7	Explain Adjacency Matrix, Path Matrix	Black board
37	37	55 min	7	Quiz	Black board
38	38	55 min	8	Discuss Algorithms for Bubble sort, Quick sort,	Black board
39	39	55 min	8	Merging	Black board
40	40	55 min	8	Merging	Black board
41	41	55 min	8	Linear searching, Binary searching.	Black board
42	42		8	Quiz	
43	43	55 min	9	Discuss Different types of files organization and their access method,	Black board
44	44	55 min	9	Discuss Different types of files organization and their access method,	Black board
45	45	55 min	9	Introduction to Hashing, Hash function, collision resolution, open addressing.	Black board
46	46	55 min	9	Quiz	Black board
47	47	55 min	6	Quiz	Black board
48	48	55 min	6	Chapter1 Revision	Black board
49	49	55 min	6	Chapter2 Revision	Black board
50	50	55 min	6	Chapter3 Revision	Black board
51	51	55 min	6	Chapter4 Revision	PPT
52	52	55 min	6	Chapter5 Revision	PPT
55	55	55 min	6	Chapter6 Revision	Black board
56	56	55 min	6	Chapter7 Revision	Black board
57	57	55 min	6	Chapter8 Revision	Black board
58	58	55 min	6	Chapter9 Revision	PPT
59	59	55 min	6	Revision of all topics	Black board
60	60	55 min	6	Revision of all topics	Black board

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Lesson Plan

Name of the faculty	**RABI KUMAR DARJI**	Total Hrs planned:60 Total Hrs per week: 04
Session	**2024- 25**	
Subject: Code/Name	**Th.1b**	**OOM**
Semester/Programme/ Department	3rd Semester/ Diploma/ Information Technology	
Course Objective	After completion of this course the student will be able to**:** ● Understand the concepts of OOPs, their advantages and applications ● Comprehend the features of Java ● Know to create classes, objects, methods ● Know the concepts and advantages of overloading methods and type conversions ● Appreciate the concepts of inheritance and the various types of inheritance. ● Understand the use of Interfaces and system packages ● Use the various operations of files to perform file operations ● Understand the concept of managing errors and exceptions	

Sl. No	Detail Description of Topics/Subtopics	Mode of Lecture
1	**Chapter1: OBJECT ORIENTED PROGRAMMING (OOPS) CONCEPTS**	Chalk & talk
2	Programming Languages	Chalk & talk
3	Object Oriented Programming & OOPS concepts and terminology	Chalk & talk
4	Benefit of OOPS & Application of OOPS	Chalk & talk
5	Revision of Chapter 1	Questionaries

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6	**Chapter2: INTRODUCTION TO JAVA**	Chalk & talk
7	What is Java?	Chalk & talk
8	Execution Model of Java, The Java Virtual Machine	PPT
9	A First Java Program & Variables and Data types	Chalk & talk
10	Primitive Datatypes & Declarations	Chalk & talk
11	Numeric and Character Literals, String Literals	Chalk & talk
12	Arrays, Non-Primitive Datatypes	Chalk & talk
13	Casting and Type Casting	Chalk & talk
14	Widening and Narrowing Conversions	Chalk & talk
15	Operators and Expressions & Control Flow Statements	Chalk & talk
16	Revision of Chapter 3	Questionaries
17	**Chapter 3: OBJECTS AND CLASSES**	Chalk & talk
18	Concept and Syntax of class	Chalk & talk
19	Defining a Class	PPT
20	Concept and Syntax of Methods	Chalk & talk
21	Defining Methods & Creating an Object	Chalk & talk
22	Accessing Class Members & Instance Data and Class Data	Chalk & talk
23	Constructors & Access specifiers	Chalk & talk
24	Access Modifiers & Access Control	PPT
25	Revision of Chapter 3	Questionaries & Quiz
26	**Chapter 4: USING JAVA OBJECTS**	Chalk & talk
27	String Builder and String Buffer	PPT
28	Methods and Messages & Parameter Passing	Chalk & talk
29	Comparing and Identifying Objects	Chalk & talk
30	Revision of Chapter 4	Questionaries

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31	**Chapter 5: INHERITANCE**	Chalk & talk
32	Inheritance in Java	PPT
33	Use of Inheritance, Types of Inheritance	Chalk & talk
34	Single Inheritance & Multi-level Inheritance	Chalk & talk
35	Hierarchical Inheritance & Hybrid Inheritance	Chalk & talk
36	Revision of Chapter 5	Questionaries
37	**Chapter 6: POLYMORPHISM**	Chalk & talk
38	Types of Polymorphism & Method Overloading	Chalk & talk
39	Run time Polymorphism & Method Overriding	Chalk & talk
40	Revision of Chapter 6	Questionaries
41	**Chapter 7: PACKAGES: PUTTING CLASSES TOGETHER**	Chalk & talk
42	Java API Packages	Chalk & talk
43	Using System Packages, Naming Convention	Chalk & talk
44	Creating Packages, Accessing a Package	PPT
45	Using a Package, Adding a Class to Package	Chalk & talk
46	Hiding Classes, Static Import	Chalk & talk
47	Revision of Chapter 7	Questionaries
48	**Chapter 8 : JAVA FILES AND I/O**	Chalk & talk
49	What is a stream? & Reading and writing to files (only txt files)	Chalk & talk
50	Input and Output Stream & Manipulating Input data	PPT
51	Opening and Closing Streams	Chalk & talk
52	Predefined streams, File handling Classes and Methods	Chalk & talk
53	Revision of Chapter 8	Questionaries
54	**Chapter 9: EXCEPTION HANDLING**	Chalk & talk
55	Exceptions Overview, Exception Keywords	PPT

56	Catching Exceptions & Declaring Exceptions	Chalk & talk
57	Using Finally Statement, Exception Methods	Chalk & talk
58	Defining and throwing exceptions	Chalk & talk
59	Errors and Runtime Exceptions	Chalk & talk
60	Revision of Chapter 9	Questionaries

Text Book- 1(TB1): Programming with Java **Name of Authors:** E. Balagurusami **Name of Publisher:** The McGraw-Hill
Reference Book 1 (RB1): Java A Beginner's Guide **Name of Authors**: Herbert Schildt **Name of Publisher:** McGraw-Hill Education

SUBJECT FACULTY H.O.D PRINCIPAL

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Name	**MRS. BARSHARANI PATEL**	Academic Year 2024 - 25
Subject: Code/Name	Th.5	**ENVIRONMENTAL STUDIES**
Semester/Program/ Department	3 rd SEMESTER/ Diploma/ Information Technology	
Course Objective	After completion of the course, the student will be able to: • Gather adequate knowledge of different pollutants, their sources and shall be aware of solid waste management systems and hazardous waste and their effects. • Develop awareness towards preservation of environment	

Lesson Plan

Sl. no	Period / class	Time (min)	unit	Detail Description of Topics/Subject	Mode of Lecture	References (Text Book and reference book Page No to)
1	1	55	1	**Chapter1:** The Multidisciplinary nature of environmental studies	Chalk & talk	TB1: 1 to 12
2	2	55	1	Definition, scope and importance	Chalk & talk	TB1: 1 to 4
3	3	55	1	Need to public awareness	Chalk & talk	TB1: 7
4	4	55	1	Revision of Chapter 1	Question naries'	
5	5	55	2	**Chapter2:** Natural resources, Renewable and non-renewable resources	Chalk & talk	RB2: 7pg-8- to 69
6	6	55	2	Natural resources and associated problems.	Chalk & talk	RB2: pg. 9
7	7	55	2	**Forest Resources:** Use and over-exploitation, deforestation, case studies, Timber extraction mining, Dams and there effects on forests and tribal people	Chalk & talk	TB1:23 to 26
8	8	55	2	**Water Resources:** Use and over-utilization of surface and ground water floods, drought, conflicts over water, dam's benefits and problems	Chalk & talk	TB1: 26 to 30
9	9	55	2	**Mineral Resources:** Use and exploitation, environmental effects of extracting and using mineral resources	Chalk & talk	TB1: 31 to 33
10	10	55	2	**Food Resources:** World food problems, changes caused by agriculture and over grazing, effects of modern agriculture, fertilizers-pesticides problems, water-logging, sanitary.	Chalk & talk	TB1: 34 to 36

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10	10	55	2	**Energy Resources:** Growing energy need, renewable and non-renewable energy sources, case studies.	Chalk & talk	TB1: 34 to 36
11	11	55	2	**Land Resources:** land as a resource, land degradation, man incudes landslides, soil erosion, and desertification.	Chalk & talk	TB1- 50 to 51
12	12	55	2	Role of individual in conservation of natural resources	Chalk & talk	TB1: 51to 52
13	13	55	2	Equitable use of resources for sustainable life styles	Chalk & talk	TB1: 52to 53
14	14	55	2	Revision of Chapter 2	Questionaries'	
15	15	55	3	**Chapter3: SYSTEMS**	Chalk & talk	TB1: 54 to 83
16	16	55	3	Concept of an eco-system	Chalk & talk	TB1:54 to 55
17	17	55	3	structure and function of an eco-system Producers, consumers, decomposers	Chalk & talk	TB1: 55 to57
18	18	55	3	Energy flow in the eco systems	Chalk & talk	TB 1: 58-65
19	19	55	3	Ecological succession	Chalk & talk	TB1:65
20	20	55	3	Food chains, food web and ecological pyramids	Chalk & talk	TB1: 65 to 67
21	21	55	3	Introduction, types, characteristic features, structure and function of the following eco system	Chalk & talk	TB1:68
22	22	55	3	Forest ecosystem	Chalk & talk	TB1: 69 to 74
23	23	55	3	Aquatic eco systems (ponds, stream, lakes, rivers, oceans, estuaries)	Chalk & talk	TB1: 79 to 82
24	24	55	3	Revision of Chapter-3	Chalk & talk	
25	25	55	4	**Chapter4: Biodiversity and it's conservation**	PPT	TB1:85-98
26	26	55	4	Introduction- Definition: genetics, species and ecosystem diversity	Chalk & talk	TB1: 85 TO 87
27	27	55	4	Biogeographically classification of India	Chalk & talk	TB1: 87 to 89
28	28	55	4	Value of biodiversity: consumptive use, productive use	Chalk & talk	TB1: 89 to 92
29	29	55	4	social ethical, aesthetic and optic values	Chalk & talk	TB1: 89 to 92
30	30	55	4	Biodiversity at global, national and local level	Chalk & talk	TB1: 92to 93
31	31	55	4	Threats to biodiversity: Habitats loss, poaching of wild life, man wildlife conflicts	Chalk & talk	TB1: 96 to 98
32	32	55	4	Revision of Chapter-4	Questionaries'	

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33	33	55	5	**Chapter5:** Environmental pollution	Chalk & talk	TB1: 118 to173
34	34	55	5	Definition causes, effects and control measures of:	Chalk & talk	TB1: 118 to 119
35	35	55	5	Air pollution	Chalk & talk	TB1:119 to 130
36	36	55	5	Water pollution Soil pollution	Chalk & talk	TB1: 130 to 136
37	37	55	5	Marine pollution	Chalk & talk	TB1:142 to 146
38	38	55	5	Noise pollution	Chalk & talk	TB1: 147 to 149
39	39	55	5	Thermal pollution	Chalk & talk	TB1: 149 to 150
40	40	55	5	Nuclear pollution	Chalk & talk	TB1: 150 to 152
41	41	55	5	Solid waste management: Causes, effects and control measures of urban and industrial wastes	Chalk & talk	TB1: 152 to 160
42	42	55	5	Role of an individual in prevention of pollution	Chalk & talk	TB1: 160 to 164
43	43	55	5	Disaster management: Floods, earthquake, cyclone and landslides	Chalk & talk	TB1: 164 to 173
44	44	55	5	Revision of Chapter-5	Questionaries'	
45	45	55	6	**CHAPTER 6:** Social issues and the Environment	Chalk & talk	TB1: 175 to 213
46	46	55	6	Form unsustainable to sustainable development	Chalk & talk	TB1: 175 to 176
47	47	55	6	Urban problems related to energy	PPT	TB1:177
48	48	55	6	Water conversation, rain water harvesting, watershed management	Chalk & talk	TB1:178 to181
49	49	55	6	Resettlement and rehabilitation of people; its problems and concerns	Chalk & talk	TB1:181
50	50	55	6	Environmental ethics: issue and possible solutions	Chalk & talk	TB1:182 to 188
51	51	55	6	Climate change, global warming, acid rain, ozone layer, depletion, nuclear accidents and holocaust, case studies	Chalk & talk	TB1:189 to 195
52	52	55	6	Air (prevention and control of pollution) Act.	PPT	TB1:201 to 204
53	53	55	6	Water (prevention and control of pollution) Act. Public awareness	Chalk & talk	
54	54	55	6	Revision of Chapter-6	Questionaries	

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55	55	55	7	**CHAPTER 7:** Human population and the environment	Chalk & talk	TB1: 220- 246
56	56	55	7	Population growth and variation among nations	Chalk & talk	TB1:220-222
57	57	55	7	Population growth and variation among nations Population explosion-family welfare program	Chalk & talk	TB1:220-222
58	58	55	7	Environment and human health Human rights	PPT	
59	59	55	7	Value education Role of information technology in environment and human health	Chalk & talk	TB1:236-245
60	60	55	7	Problems and revision	Chalk & talk	TB1:236-245
				Text Book- 1 (TB1): Text book of environmental studies, Erach Bharucha, # UGC. Reference Book 1 (RB1): Fundamentals concept of Environmental studies. D.D Mishra, S. Chand & co Ltd		

LESSON PLAN	
JHARSUGUDA ENGINEERING SCHOOL, JHARSUGUDA	
Name of the Faculty: Sunil Pal	Academic Year: 2024 - 25
Course No.: Th. 3	Course Name: DIGITAL ELECTRONICS
Program: Diploma	Branch: IT
Year/Sem: II / III	Section: NA

Sl. No.	Period	Time (min)	Unit	Topic to be Covered	Teaching Method
1.	1.	55	1	Introduction to Digital Electronics	Chalk & Board
2.	2.	55	1	Introduction to various number systems and conversion from one system to another number system	Chalk & Board
3.	3.	55	1	Arithmetic operations of Binary numbers, 1's & 2's compliment form and subtraction using compliment method	Chalk & Board
4.	4.	55	1	Weighted & non-weighted codes- Binary, excess-3 and Gray	Chalk & Board
5.	5.	55	1	Logic Gates – symbol, function, truth table & timing diagram	Chalk & Board
6.	6.	55	1	Concept of Universal gates and realization of various gates using NAND gate	Chalk & Board
7.	7.	55	1	Realization of various gates using NOR gate	Chalk & Board
8.	8.	55	1	Boolean algebra, Boolean expression	Chalk & Board
9.	9.	55	1	Various Boolean laws and De-Morgan's Theorem	Chalk & Board
10	10.	55	1	SOP and POS representation of Logic Expressions	Chalk & Board
11	11.	55	1	Karnaugh Map and related Numerical	Chalk & Board
12	12.	55	1	Revision of Unit – 1 and solving numerical from the chapter	Chalk & Board
13	13.	55	2	Introduction to various Combinational logic circuits	Chalk & Board
14	14.	55	2	Adder- half adder and Full Adder	Chalk & Board
15	15.	55	2	Subtractor – Half and Full Subtractor	Chalk & Board
16	16.	55	2	Serial and Parallel Binary 4-bit adder	Chalk & Board
17	17.	55	2	Multiplexer (4:1)	Chalk & Board
18	18.	55	2	De-multiplexer (1:4)	Chalk & Board
19	19.	55	2	Encoder	Chalk & Board
20	20.	55	2	Priority encoder	Chalk & Board
21	21.	55	2	3-bit Comparator	Chalk & Board
22	22.	55	2	Seven segment Decoder	Chalk & Board
23	23.	55	2	Revision of Unit – 2	Chalk & Board
24	24.	55	3	Differentiation between Combinational & Sequential Logic circuit	Chalk & Board
25	25.	55	3	Principle of Latch and Flip-flop and its operation	Chalk & Board

26	26.	55	3	Types of Flip-flops – SR, JK, D, T	Chalk & Board
27	27.	55	3	SR Flip-flop using NAND & NOR latch(unlocked)	Chalk & Board
28	28.	55	3	Clocked SR flip flop	Chalk & Board
29	29.	55	3	Clocked JK, D and T flip-flop	Chalk & Board
30	30.	55	3	Circuit diagram, Truth table and logical expression of SR and JK flip-flop	Chalk & Board
31	31.	55	3	Circuit diagram, Truth table and logical expression of D and T flip-flop	Chalk & Board
32	32.	55	3	Concept of Race Around Condition and idea of Master Slave Flip-flop	Chalk & Board
33	33.	55	3	Operation of Master- Slave JK flip-flop	Chalk & Board
34	34.	55	3	Advantages and Disadvantages of Master- Slave JK flip-flop	Chalk & Board
35	35.	55	3	Revision of Unit – 3	Chalk & Board
36	36.	55	4	Shift registers- SISO, SIPO, PISO, PIPO	Chalk & Board
37	37.	55	4	Operations of shift registers	Audio –Visual using Smart Class
38	38.	55	4	Applications of Shift registers	Chalk & Board
39	39.	55	4	Counters and its types and operation of Binary counter, Asynchronous ripple counter	Chalk & Board
40	40.	55	4	Operation of Decade counter, Synchronous counter and Ring counter	Chalk & Board
41	41.	55	4	Concept of memories- RAM, ROM, SRAM, DRAM & PS RAM	Chalk & Board
42	42.	55	4	Concept of PLD and its applications	Chalk & Board
43	43.	55	4	Revision of unit – 4	Chalk & Board
44	44.	55	5	Introduction to A/D & D/A convertors and its need	Chalk & Board
45	45.	55	5	D/A conversion using weighted resistors methods	Chalk & Board
46	46.	55	5	D/A conversion using R-2R ladder network	Chalk & Board
47	47.	55	5	A/D conversion using counter method	Chalk & Board
48	48.	55	5	A/D conversion using Successive approximate method	Chalk & Board
49	49.	55	5	Revision of unit – 5	Chalk & Board
50	50.	55	6	Concept of Integrated circuit and its need in present.	Chalk & Board
51	51.	55	6	IC Fabrication process	Audio –Visual using Smart Class
52	52.	55	6	Description of various steps involved in IC Fabrication process	Audio –Visual using Smart Class
53	53.	55	6	Digital ICs and its characteristics- propagation Delay, Fan-in, fan-out, power dissipation	Chalk & Board
54	54.	55	6	Explaining terms like Noise margin, Power supply requirement and Speed with reference to logic Families	Chalk & Board

55	55.	55	6	Features, Circuit operation & applications of TTL(NAND) logic circuit	Chalk & Board
56	56.	55	6	Features, Circuit operation & applications of CMOS logic circuit using NAND gate	Chalk & Board
57	57.	55	6	Features, Circuit operation & applications of CMOS logic circuit using NOR gate	Chalk & Board
58	58.	55	6	Comparing different logic circuits	Chalk & Board
59	59.	55	6	Revision of Unit – 6	Chalk & Board
60	60.	55	6	Overall revision of the subject	Chalk & Board