LessonPlan

Name of the Faculty:	**Er. Deepika**
Discipline:	**B.Tech.(ECO)**
Semester:	**III**
Subject:	**Analog and Digital Electronics**
Subject Code:	**B24-EE-201**
WorkLoad(Lecture/Practical) perweek(In hours):	**Lecture- 40**

S.No	Lectures No.	Topic(Includingassignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording/Activity/Case Study)
1.	L1	Course overview; Energy bands in intrinsic & extrinsic silicon.	White Marker Board / PPT
2.	L2	Carrier transport: Drift current, mobility, and resistivity.	White Marker Board / PPT
3.	L3	Carrier transport: Diffusion current and total current density.	White Marker Board / PPT
4.	L4	Generation and recombination of carriers; Continuity equation.	White Marker Board / PPT
5.	L5	PN Junction: Basic structure, physical operation, and biasing.	White Marker Board / PPT
6.	L6	Derivation of barrier potential and diode current equation.	White Marker Board / PPT
7.	L7	Small-signal equivalent circuit of a p-n junction diode.	White Marker Board / PPT
8.	L8	Simple diode circuits: Half-wave and Full-wave rectifiers.	White Marker Board / PPT
9.	L9	Simple diode circuits: Clipping and clamping networks.	White Marker Board / PPT
10.	L10	Zener diode characteristics and application as a voltage regulator.	White Marker Board / PPT
11.	L11	BJT: Basic construction, types, and principle of operation.	White Marker Board / PPT
12.	L12	Transistor current gains: Derivation of α and β.	White Marker Board / PPT
13.	L13	Derivation of γ and the mathematical relationship between α, β, γ.	White Marker Board / PPT
14.	L14	Various modes of operation of BJT (Active, Cutoff, Saturation).	White Marker Board / PPT
15.	L15	Base Width Modulation (Early Effect) and its impact.	White Marker Board / PPT
16.	L16	Introduction to transistor models: Low-frequency hybrid model.	White Marker Board / PPT
17.	L17	h-parameter equivalent circuit of a BJT amplifier configuration.	White Marker Board / PPT
18.	L18	Analysis of transistor amplifier: Calculation of input impedance.	White Marker Board / PPT
19.	L19	Analysis of transistor amplifier: Calculation of output impedance.	White Marker Board / PPT

20.	L20	Analysis of transistor amplifier: Calculation of voltage gain.	White Marker Board / PPT
21.	L21	Introduction to Decimal, Binary, Octal, and Hexadecimal systems.	White Marker Board / PPT
22.	L22	Number system conversions (Base-to-Base translation).	White Marker Board / PPT
23.	L23	Binary weighted codes and signed number representation.	White Marker Board / PPT
24.	L24	1's and 2's complement representations and applications.	White Marker Board / PPT
25.	L25	Binary arithmetic: Addition, subtraction, and complement arithmetic.	White Marker Board / PPT
26.	L26	Boolean Algebra: Binary logic functions and basic logic gates.	White Marker Board / PPT
27.	L27	Boolean laws, postulates, and verifying truth tables.	White Marker Board / PPT
28.	L28	Associative and distributive properties; De-Morgan’s theorems.	White Marker Board / PPT
29.	L29	Algebraic simplification of complex switching functions.	White Marker Board / PPT
30.	L30	Realization of switching functions using basic and universal gates.	White Marker Board / PPT
31.	L31	Switching equations, canonical logic forms: SOP and POS.	White Marker Board / PPT
32.	L32	Introduction to Karnaugh maps: Two and three-variable K-maps.	White Marker Board / PPT
33.	L33	Four-variable K-maps: Simplification of switching expressions.	White Marker Board / PPT
34.	L34	Combinational Logic: Design of Half-Adder and Full-Adder.	White Marker Board / PPT
35.	L35	Combinational Logic: Design of Half-Subtractor and Full-Subtractor.	White Marker Board / PPT
36.	L36	Design and application of Encoders and Decoders.	White Marker Board / PPT
37.	L37	Design and application of Multiplexers (MUX) and De-Multiplexers.	White Marker Board / PPT
38.	L38	Design of Magnitude Comparators and Parity Generators.	White Marker Board / PPT
39.	L39	Sequential circuits introduction: 1-bit memory and Clocked SR flip-flop.	White Marker Board / PPT
40.	L40	Detailed study of J-K, T, and D-type flip-flops.	White Marker Board / PPT
41.			
42.			

Lesson Plan

Name of the Faculty:	Dr. Shabnam Parveen
Discipline:	B.Tech. Electrical and Computer Engg.
Semester:	III
Subject:	Computer Organization and Architecture
Subject Code:	B24-EE-203
WorkLoad (Lecture/Practical) per week (In hours):	Lecture- 3 / Total 40 Lectures

S.No	Lectures No.	Topic (Including assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording/Activity/Case Study)
1	L1	Course Overview: Introduction to COA - Functional units, Basic operational concepts, Von Neumann vs Harvard Architecture	White Marker Board / PPT
2	L2	Historical Evolution of Computers, Generations, Performance Metrics - MIPS, MFLOPS, Amdahl's Law	White Marker Board / PPT
3	L3	Computer Organization vs Architecture, Instruction Execution Cycle, Instruction Types	White Marker Board / PPT
4	L4	Number Systems: Binary, Octal, Hexadecimal, Binary Arithmetic, 1's & 2's Complement, Floating Point Representation IEEE 754	White Marker Board / PPT
5	L5	Digital Logic Recap: Boolean Algebra, Logic Gates, Combinational Circuits - Adder, Subtractor, ALU Design	White Marker Board / PPT
6	L6	Instruction Set Architecture: Instruction Format, Types - Zero, One,	White Marker Board / PPT

		Two, Three Address Instructions	
7	L7	Addressing Modes: Immediate, Direct, Indirect, Register, Indexed, Relative, Auto-increment/decrement - Examples	White Marker Board / PPT
8	L8	RISC vs CISC Architecture - Characteristics, Comparison, Examples (ARM, x86), Quiz-1	White Marker Board / PPT / Activity
9	L9	CPU Organization: Processor Organization, Register Organization - User visible & Control/Status Registers	White Marker Board / PPT
10	L10	Instruction Cycle: Fetch, Decode, Execute, Interrupt Cycle, State Diagram	White Marker Board / PPT
11	L11	Control Unit: Hardwired Control - Design, Pros & Cons, Micro-programmed Control Unit	White Marker Board / PPT
12	L12	Micro-programmed Control: Micro-instruction Format, Microprogram Sequencing, Wilkes Control, Assignment-1	White Marker Board / PPT / Activity
13	L13	Pipeline Concepts: Introduction, Speedup, Pipeline Hazards - Data, Control, Structural Hazards	White Marker Board / PPT
14	L14	Hazard Resolution: Forwarding, Stalling, Branch Prediction - Static & Dynamic, Delayed Branch	White Marker Board / PPT
15	L15	Instruction Level Parallelism:	White Marker Board / PPT

		Superscalar Processors, Superpipelining, VLIW Architecture	
16	L16	Memory Hierarchy: Need, Characteristics, Pyramid - Locality of Reference Principle	White Marker Board / PPT
17	L17	Main Memory: RAM, ROM, Types - SRAM, DRAM, Organization, Memory Interleaving	White Marker Board / PPT
18	L18	Cache Memory: Mapping Techniques - Direct, Fully Associative, Set-Associative, Replacement Policies	White Marker Board / PPT
19	L19	Cache Write Policies: Write Through vs Write Back, Cache Coherence, Performance - Hit/Miss Ratio	White Marker Board / PPT
20	L20	Virtual Memory: Concept, Paging, Segmentation, Page Replacement Algorithms - FIFO, LRU, Optimal, Test-1	White Marker Board / PPT / Activity
21	L21	Secondary Memory: Magnetic Disks, SSD, RAID Levels - 0,1,5,10 - Concepts and Comparison	White Marker Board / PPT
22	L22	Input/Output Organization: I/O Module, Isolated vs Memory Mapped I/O, Programmed I/O	White Marker Board / PPT
23	L23	Interrupt Driven I/O: Concept, Interrupt Handling, Types of Interrupts, Priority Interrupt System	White Marker Board / PPT
24	L24	Direct Memory Access (DMA): DMA Controller, Transfer Modes - Burst, Cycle Stealing, Transparent	White Marker Board / PPT

25	L25	I/O Channels and Processors, I/O Buses - Standard Buses (PCI, USB), Bus Arbitration Methods	White Marker Board / PPT
26	L26	Parallel Processing: Flynn's Taxonomy - SISD, SIMD, MISD, MIMD, Multicore Concepts	White Marker Board / PPT
27	L27	Multiprocessor Organization: UMA, NUMA, Interconnection Structures - Bus, Crossbar, Multistage	White Marker Board / PPT
28	L28	Arithmetic Logic Unit: Integer Addition/Subtraction - Ripple Carry, Carry Lookahead Adder	White Marker Board / PPT
29	L29	Multiplication Algorithms: Booth's Algorithm, Division - Restoring and Non-restoring, Floating Point Arithmetic	White Marker Board / PPT
30	L30	Case Study-I: Architecture of 8085 / 8086 Microprocessor - Block Diagram and Working, Assignment-2	White Marker Board / PPT / Video Recording / Case Study
31	L31	Case Study-II: ARM Processor Architecture - Features, Instruction Set, Applications	White Marker Board / PPT / Video Recording / Case Study
32	L32	Case Study-III: x86 Pentium Architecture - Pipeline Stages, Cache Organization, Video on Pipelining	White Marker Board / PPT / Video Recording / Case Study
33	L33	Performance Enhancement: Instruction Prefetch, Branch Target Buffer, Speculative Execution	White Marker Board / PPT
34	L34	Embedded Systems: Introduction to Embedded	White Marker Board / PPT

		Architecture, Comparison with General Purpose Computer	
35	L35	Practical Discussion: Assembly Language Programming Concepts, Instruction Implementation	White Marker Board / PPT
36	L36	Revision-I: Number Systems, Instruction Set, Addressing Modes, CPU & Control Unit - Important Questions	White Marker Board / PPT / Activity
37	L37	Revision-II: Pipelining, Memory Hierarchy, Cache & Virtual Memory - PYQ Discussion	White Marker Board / PPT / Activity
38	L38	Revision-III: I/O Organization, DMA, Parallel Processing, ALU - Important Questions	White Marker Board / PPT / Activity
39	L39	Open Doubt Session: Numerical Problems on Cache, Pipeline Speedup, Amdahl's Law	White Marker Board / PPT / Activity
40	L40	Course Wrap-up: Emerging Trends - Quantum, Neuromorphic Architecture, Quiz-2	White Marker Board / PPT / Activity

Lesson Plan

Name of the Faculty:	Er. Ridhi Sharma
Discipline:	B.Tech. Electrical and Computer Engg.
Semester:	III
Subject:	Data Structures
Subject Code:	B24-EE-205
WorkLoad (Lecture/Practical) per week (In hours):	Lecture- 3, Practical- 2 / Total 40 Lectures

S.No	Lectures No.	Topic (Including assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording/Activity/Case Study)
1	L1	Introduction to Data Structures: Definition, Classification (Primitive & Non-primitive), Abstract Data Type (ADT)	White Marker Board / PPT
2	L2	Algorithm Analysis: Time & Space Complexity, Asymptotic Notations - Big O, Omega, Theta, Complexity calculation	White Marker Board / PPT
3	L3	Arrays: Representation in memory, Operations - Traversal, Insertion, Deletion, Searching, Single & Multi-dimensional arrays	White Marker Board / PPT
4	L4	Searching Techniques: Linear Search, Binary Search - Algorithm, Complexity, Implementation	White Marker Board / PPT
5	L5	Sorting-I: Bubble Sort, Selection Sort - Algorithm, Analysis, Dry run	White Marker Board / PPT
6	L6	Sorting-II: Insertion Sort, Quick Sort - Partition logic, Recurrence, Complexity	White Marker Board / PPT
7	L7	Sorting-III: Merge Sort, Heap Sort - Divide & Conquer approach, Comparison of sorting algorithms	White Marker Board / PPT
8	L8	Stacks: Definition, Representation (Array & Linked List), Operations -	White Marker Board / PPT

		PUSH, POP, Applications	
9	L9	Stack Applications-I: Infix, Prefix, Postfix expressions, Conversions using Stack	White Marker Board / PPT
10	L10	Stack Applications-II: Evaluation of Postfix expression, Recursion implementation using Stack, Assignment-1	White Marker Board / PPT / Activity
11	L11	Queues: Definition, Types, Array representation, Operations, Limitations of linear queue	White Marker Board / PPT
12	L12	Types of Queues: Circular Queue, Deque, Priority Queue - Operations, Applications, Implementation	White Marker Board / PPT
13	L13	Linked List: Need of dynamic data structures, Types, Representation, Comparison with Array	White Marker Board / PPT
14	L14	Singly Linked List: Creation, Traversal, Insertion (begin, end, pos), Deletion, Searching	White Marker Board / PPT
15	L15	Doubly Linked List: Structure, Operations - Insertion, Deletion, Advantages/Disadvantages	White Marker Board / PPT
16	L16	Circular Linked List & Header Linked List: Operations, Applications - Polynomial representation	White Marker Board / PPT
17	L17	Applications of Linked List: Polynomial Addition, Sparse Matrix Representation, Quiz-1	White Marker Board / PPT / Activity
18	L18	Trees: Basic Terminology, Binary Tree - Definition, Properties, Types (Full, Complete, Perfect)	White Marker Board / PPT
19	L19	Binary Tree Representation: Array and Linked representation, Traversals - Inorder, Preorder, Postorder (Recursive & Iterative)	White Marker Board / PPT
20	L20	Binary Search Tree (BST): Construction, Insertion,	White Marker Board / PPT

		Deletion, Searching, Complexity Analysis	
21	L21	Balanced Trees: AVL Trees - Rotations (LL, RR, LR, RL), Insertion & Deletion with balancing	White Marker Board / PPT
22	L22	B-Trees & B+ Trees: Introduction, Properties, Insertion, Applications in Database	White Marker Board / PPT
23	L23	Heap: Max-Heap, Min-Heap, Heapify, Heap Sort, Priority Queue implementation using Heap	White Marker Board / PPT
24	L24	Graphs: Terminology, Representation - Adjacency Matrix, Adjacency List, Comparison	White Marker Board / PPT
25	L25	Graph Traversals: BFS and DFS - Algorithm, Implementation, Complexity, Applications	White Marker Board / PPT
26	L26	Shortest Path & Minimum Spanning Tree: Dijkstra's, Prim's and Kruskal's Algorithms	White Marker Board / PPT
27	L27	Hashing: Hash Functions, Collision Resolution Techniques - Chaining, Open Addressing (Linear, Quadratic Probing)	White Marker Board / PPT
28	L28	Hashing Applications & Double Hashing, Rehashing, Load Factor, Test-1	White Marker Board / PPT / Activity
29	L29	Advanced Data Structures: Trie, Segment Tree - Introduction and Applications	White Marker Board / PPT
30	L30	Disjoint Set (Union-Find), Huffman Coding - Concept and Implementation	White Marker Board / PPT
31	L31	Recursion: Concept, Types, Tower of Hanoi, Applications in Data Structures	White Marker Board / PPT
32	L32	File Structures & Indexing: Sequential,	White Marker Board / PPT

		Indexed files, ISAM	
33	L33	Case Study: Implementation of Stack & Queue using Linked List vs Array - Performance comparison	White Marker Board / PPT / Activity / Case Study
34	L34	Case Study: Real-life applications of Trees and Graphs (Social Networks, File System)	White Marker Board / PPT / Activity / Case Study
35	L35	Practical Problem Solving: Lab Problems Discussion - Linked List and Tree programs	White Marker Board / PPT / Activity / Case Study
36	L36	Practical Problem Solving: Sorting and Searching implementation in C/C++	White Marker Board / PPT / Activity / Case Study
37	L37	Revision: Arrays, Stacks, Queues, Linked List - Important Questions	White Marker Board / PPT / Activity
38	L38	Revision: Trees, BST, AVL, Heaps, Hashing - Important Questions, Assignment-2 Discussion	White Marker Board / PPT / Activity
39	L39	Revision: Graphs, Advanced Topics - Previous Year Questions	White Marker Board / PPT / Activity
40	L40	Course Wrap-up: Open Doubts, Project Ideas using Data Structures, Quiz-2	White Marker Board / PPT / Activity

Lesson Plan

Name of the Faculty:	**Er. Maninder Singh**
Discipline:	**B.Tech.(ECO)**
Semester:	**3rd**
Subject:	**Electrical Machine-I**
Subject Code:	**B24-EE-207**
Work Load(Lecture/Practical) per week(In hours):	**Lecture-03**

S.No	Lectures No.	Topic(Including assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording/Activity/Case Study)
43.	L1	Overview of the subject, it's application and scope	Chalk and Board
44.	L2	Principle, construction of core, winding & tank of transformer	Chalk and Board
45.	L3	Operation and ideal transformer	Chalk and Board
46.	L4	equivalent circuit of transformer	Chalk and Board
47.	L5	phasor diagram parameters determination	Chalk and Board
48.	L6	P.U Representation of parameters,	PPT
49.	L7	Regulation of transformer	Chalk and Board
50.	L8	losses & efficiency of transformer	Chalk and Board
51.	L9	separation of iron losses	Chalk and Board
52.	L10	testing of Single phase transformer,	PPT
53.	L11	REVISION	Chalk and Board
54.	L12	Three phase transformer	Chalk and Board
55.	L13	Various types of connection of three phase transformer	PPT
56.	L14	their comparative features, , Zigzag connection	PPT
57.	L15	Parallel operation of single phase transformer	Chalk and Board
58.	L16	Parallel operation of three phase transformer	Chalk and Board
59.	L17	Auto-Transformer: Principle, construction	Chalk and Board
60.	L18	comparison with two winding transformers, applications	PPT
61.	L19	REVISION	Chalk and Board

62.	L20	Nature of magnetizing current	PPT
63.	L21	Plotting of magnetizing current from B-H curve	Chalk and Board
64.	L22	Inrush current, harmonics	Chalk and Board
65.	L23	connection of three phase transformer	PPT
66.	L24	Phase-Conversion: Three to two phase	Chalk and Board
67.	L25	Phase-Conversion :three to six phase	Chalk and Board
68.	L26	Phase-Conversion :three to twelve phase	Chalk and Board
69.	L27	Introduction to three winding transformer	PPT
70.	L28	Introduction to phase- shifting transformers	PPT
71.	L29	REVISION	Chalk and Board
72.	L30	principle & construction of D.C. generator	PPT
73.	L31	simplex lap wave winding	Chalk and Board
74.	L32	E.M.F. equation of DC Generator	Chalk and Board
75.	L33	armature reaction	PPT
76.	L34	compensating winding, commutation	PPT
77.	L35	methods of excitation of DC Generator	Chalk and Board
78.	L36	load characteristics of DC Generator	Chalk and Board
79.	L37	parallel operation of DC Generator	Chalk and Board
80.	L38	Principle of DC motors, torque and output power equations	PPT
81.	L39	load characteristics of DC Motor	Chalk and Board
82.	L40	starting of DC Motor	Chalk and Board
83.	L41	speed control of DC Motor	Chalk and Board
84.	L42	braking of DC Motor	PPT
85.	L43	testing of DC Motor	PPT
86.	L44	efficiency & applications of DC Motor	Chalk and Board
87.	L45	REVISION	Chalk and Board
88.			
89.			
90.			

Lesson Plan

Name of the Faculty:	Dr. Rishi Sarup Sharma
Discipline:	B.Tech. Electrical and Computer Engg.
Semester:	III (3rd)
Subject:	Electrical Power Generation
Subject Code:	B24-EE-209
Work Load (Lecture/Practical) per week (In hours):	Lecture - 3 Hours
Credits:	3
Session:	2025-26 (Odd Semester)

Course Details as per Kurukshetra University NEP Syllabus:

Purpose: Students will familiarize with power plants economics, cost factors, and overview of conventional power plants.

CO1: To study, Load and load forecasting, Power plant economics, Tariffs and power factor improvement used in power generation

CO2: To understand tariffs, importance of power factor and working of Thermal power plants.

CO3: To understand working of Thermal power plants.

CO4: To understand working of Nuclear power plants, Diesel power plants & Combined working of thermal & hydel plants.

S. No	Lecture No.	Topic (Including assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording/Activity/Case Study)	CO Mapping
1	L1	Course introduction, Bloom's taxonomy, evaluation scheme, importance of Electric Power Generation	Chalk and Board + PPT	CO1
2	L2	Load curves: Definition, types, chronological load curve, load duration curve	Chalk and Board + PPT	CO1
3	L3	Important terms: Connected load, Maximum demand, Demand factor	Chalk and Board	CO1
4	L4	Load factor, Diversity factor, Capacity factor, Utilization factor, Plant use factor - Problems	Chalk and Board + Numerical	CO1
5	L5	Types of loads: Domestic, Commercial, Industrial, Agricultural	PPT + Activity	CO1
6	L6	Load forecasting: Need, types (short term, long term), methods	PPT + Chalk	CO1
7	L7	Base load and peak load plants: Characteristics, differences, examples	Chalk and Board	CO1
8	L8	Power Plant Economics: Choice of type of generation, factors	PPT + Case Study	CO1

		affecting		
9	L9	Size of generator and number of units, selection criteria	Chalk and Board	CO1
10	L10	Cost of electrical energy: Fixed, semi-fixed, running costs	Chalk and Board + Numerical	CO1
11	L11	Depreciation of plant, methods of depreciation	Chalk and Board	CO1
12	L12	Effect of load factor on cost of Electrical Energy, numericals + Assignment-1	Chalk + PPT	CO1
13	L13	UNIT-II: Tariffs: Objectives, desirable characteristics	PPT + Chalk	CO2
14	L14	Different types of tariffs: Flat rate, Block rate, Two-part, Three-part, Power factor tariff	Chalk and Board	CO2
15	L15	Methods of power factor improvement: Capacitor banks, synchronous condenser, phase advancer	PPT + Video	CO2
16	L16	Numerical on tariffs and power factor improvement	Chalk and Board	CO2
17	L17	Hydro power plants: Choice of site, hydrology, essential elements	PPT + Video Recording	CO2
18	L18	Classification of hydroelectric plants: High/medium/low head, run-off river, storage, pumped storage	PPT + Case Study	CO2
19	L19	Main parts and working of hydro plants and their layouts, dams, spillways, penstock, surge tank	PPT + Video	CO2
20	L20	Characteristics of hydroelectric generators, turbine characteristics	Chalk and Board	CO2
21	L21	Speed governing: Purpose, hydraulic type governor functioning + Quiz-1	PPT + Chalk	CO2
22	L22	UNIT-III: Thermal Power Plants: Introduction, site selection, overall layout	PPT + Video	CO3
23	L23	Working of thermal	Chalk and Board + PPT	CO3

		power plant, Rankine cycle, thermodynamic cycles		
24	L24	Main parts and working of stations: Boiler, turbine, condenser	PPT + Video Recording	CO3
25	L25	Fuel handling, combustion and combustion equipment: Pulverized fuel, stokers	PPT	CO3
26	L26	Problem of ash disposal, ash handling systems	PPT + Case Study	CO3
27	L27	Circulating water schemes and supply of makeup water, cooling towers	PPT + Video	CO3
28	L28	Economizer, air pre-heater, superheater function and working	Chalk and Board + PPT	CO3
29	L29	Feed water heaters and dust collection: ESP, cyclone separators + Assignment-2	PPT + Activity	CO3
30	L30	UNIT-IV: Nuclear power plants: Introduction, choice of site, nuclear fuels	PPT + Video	CO4
31	L31	Classification of nuclear plants, main parts: Reactor, moderator, control rods, coolant	PPT + Chalk	CO4
32	L32	Layout and working of nuclear plant, PWR, BWR, PHWR	PPT + Video Recording	CO4
33	L33	Associated problems: Safety, waste disposal, environmental issues	PPT + Case Study	CO4
34	L34	Diesel Power Plants: Diesel plant equipments, main components	PPT + Chalk	CO4
35	L35	Diesel plant layout and their working, performance characteristics	PPT + Video	CO4
36	L36	Application of diesel plants, advantages/disadvantages, comparison with thermal	Chalk and Board	CO4
37	L37	Combined working of plants: Advantages of combined operation, plant	Chalk and Board + PPT	CO4

		requirements		
38	L38	Base load and peak load operation, load allocation	Chalk and Board	CO4
39	L39	Combined working of run-off river plant and steam plant, numericals	Chalk and Board	CO4
40	L40	Revision of all Units, previous year question paper discussion, doubt clearing	Chalk and Board + Activity	CO1-CO4
41		Internal Assessment / Class Test-1 and 2, Assignment evaluation	Test	
42		Beyond syllabus: Visit to Hydro/Thermal plant (virtual), Expert talk	Activity / Video	

Reference Books (As per Syllabus):

1. C.L. Wadhwa, Electric Power System (Willey Eastern Ltd).
2. I.J. Nagnath and D.P. Kothari, Power System Engineering, TMGH.
3. Power Generation by B.R. Gupta, S.Chand.
4. Power System Engg. By R.K. Rajput, Luxmi Publication.

Assessment Plan:

Internal Assessment: 30 Marks (Class tests, Assignments, Quiz, Attendance)
End Semester Exam: 70 Marks
Duration: 3 Hrs.

Lesson Plan

Name of the Faculty:	Dr. Manjeet Kaur
Discipline:	B. Tech Electrical and Computer Engg.
Semester:	III
Subject:	Organizational Behaviour
Subject Code:	B24-HSM-201
WorkLoad (Lecture/Practical) per week (In hours):	Lecture- 3 / Total 40 Lectures

S. No	Lectures No.	Topic (Including assignment/Test/Quiz)	Pedagogy (PPT/Chalk and Board/Video Recording/Activity/Case Study)
1	L1	Course Overview: Introduction to Organizational Behaviour - Definition, Nature, Scope, Goals of OB, Assignment-1 Briefing	White Marker Board / PPT / Activity
2	L2	Historical Evolution of OB, Contributing Disciplines to OB, OB Models - Autocratic, Custodial, Supportive, Collegial, System	White Marker Board / PPT
3	L3	Challenges and Opportunities for OB: Globalization, Workforce Diversity, Technology, Ethics	White Marker Board / PPT
4	L4	Individual Behaviour: Foundations - Biographical Characteristics, Ability, Learning Theories and Principles	White Marker Board / PPT
5	L5	Personality: Determinants, Big Five Personality Model, MBTI, Personality Traits relevant to OB	White Marker Board / PPT
6	L6	Perception: Process, Factors influencing Perception, Attribution Theory,	White Marker Board / PPT

		Perceptual Errors, Shortcuts in Judging others	
7	L7	Attitudes: Types, Components, Job Satisfaction - Measurement, Consequences, Job Involvement and Organizational Commitment	White Marker Board / PPT
8	L8	Values: Importance, Types - Terminal vs Instrumental, Person-Job Fit, Quiz-1	White Marker Board / PPT / Activity
9	L9	Motivation-I: Concept, Process, Early Theories - Maslow's Hierarchy, Herzberg Two-Factor, McGregor Theory X & Y	White Marker Board / PPT
10	L10	Motivation-II: Contemporary Theories - McClelland, Goal Setting, Reinforcement, Equity Theory, Expectancy Theory (Vroom)	White Marker Board / PPT
11	L11	Motivation Applications: Job Design, Job Enrichment, Job Characteristics Model, Employee Involvement Programs	White Marker Board / PPT
12	L12	Group Behaviour: Definition, Types of Groups - Formal and Informal, Stages of Group Development (Tuckman Model)	White Marker Board / PPT
13	L13	Group Properties: Roles, Norms, Status, Size, Cohesiveness - Factors affecting cohesiveness	White Marker Board / PPT
14	L14	Group Decision	White Marker Board /

		Making: Techniques - Brainstorming, Nominal Group, Delphi, Strengths and Weaknesses, Groupthink	PPT
15	L15	Teams: Difference between Groups and Teams, Types of Teams, Creating Effective Teams, Team Roles	White Marker Board / PPT
16	L16	Communication: Process, Functions, Directions - Downward, Upward, Lateral, Barriers to Effective Communication	White Marker Board / PPT
17	L17	Leadership-I: Concept, Trait Theories, Behavioural Theories - Ohio State and Michigan Studies, Managerial Grid	White Marker Board / PPT
18	L18	Leadership-II: Contingency Theories - Fiedler Model, Hersey-Blanchard Situational Leadership, Path-Goal Theory	White Marker Board / PPT
19	L19	Leadership-III: Contemporary Leadership - Transformational vs Transactional, Charismatic, Authentic Leadership	White Marker Board / PPT
20	L20	Power and Politics: Definition, Bases of Power, Dependency, Power Tactics, Organizational Politics - Causes and Management, Test-1	White Marker Board / PPT / Activity
21	L21	Conflict: Definition, Types - Task, Relationship, Process, Conflict Process Model, Conflict	White Marker Board / PPT

		Management Styles	
22	L22	Negotiation: Process, Distributive vs Integrative Bargaining, Negotiation Strategies, Case Study on Conflict Resolution	White Marker Board / PPT / Case Study / Activity / Video Recording
23	L23	Organizational Structure: Elements of Structure - Complexity, Formalization, Centralization, Common Organizational Designs	White Marker Board / PPT
24	L24	New Design Options: Team Structure, Matrix, Virtual Organization, Boundaryless Organization	White Marker Board / PPT
25	L25	Organizational Culture: Definition, Characteristics, Functions, Creation and Sustaining of Culture, Types of Culture	White Marker Board / PPT
26	L26	Organizational Change: Forces for Change, Lewin's Three-Step Model, Kotter's 8-Step Model, Resistance to Change - Overcoming	White Marker Board / PPT
27	L27	Organizational Development: Definition, OD Techniques - Sensitivity Training, Survey Feedback, Process Consultation	White Marker Board / PPT
28	L28	Stress Management: Concept, Sources of Stress, Consequences, Individual and Organizational Approaches to	White Marker Board / PPT

		Managing Stress	
29	L29	Emotional Intelligence: Concept, Goleman's Model, Importance in Workplace, Activity on EI Assessment	White Marker Board / PPT / Case Study / Activity / Video Recording
30	L30	Case Study-I: Motivation at Google / Infosys - Analysis and Discussion	White Marker Board / PPT / Case Study / Activity / Video Recording
31	L31	Case Study-II: Leadership Styles at Tata Group / Ratan Tata - Case Discussion, Assignment-2	White Marker Board / PPT / Case Study / Activity / Video Recording
32	L32	Case Study-III: Organizational Culture at Southwest Airlines / Zappos - Group Activity	White Marker Board / PPT / Case Study / Activity / Video Recording
33	L33	Decision Making in Organizations: Rational Model, Bounded Rationality, Intuition, Common Biases and Errors	White Marker Board / PPT
34	L34	Organizational Justice and Ethics: Distributive, Procedural, Interactional Justice, Ethical Behaviour in Organizations	White Marker Board / PPT
35	L35	Diversity Management: Managing a Diverse Workforce, Global Implications, Cross-Cultural OB	White Marker Board / PPT
36	L36	Revision-I: Individual Behaviour (Personality, Perception, Motivation) - Important Questions	White Marker Board / PPT / Activity
37	L37	Revision-II: Group Behaviour, Leadership, Power & Conflict - Important	White Marker Board / PPT / Activity

		Questions, Previous Year Questions	
38	L38	Revision-III: Organizational Structure, Culture, Change, Stress - Important Questions	White Marker Board / PPT / Activity
39	L39	Student Presentations: Mini Projects on OB Topics / Group Presentations and Peer Feedback	White Marker Board / PPT / Case Study / Activity / Video Recording
40	L40	Course Wrap-up: Open Doubts, Career Implications of OB, Quiz-2	White Marker Board / PPT / Activity