Lesson Plan (From January 2024 to May 2024)

Class: B.A./B.Sc. II- IV Sem.   **Paper: Software Engineering**

Week	Contents
Week 1 (01/01/2024 to 07/01/2024)	Introduction: Program vs Software, Software Engineering Paradigm, Software Crisis-Problem and Causes
Week 2 (08/01/2024 to 14/01/2024)	Phases in software development-Requirement, analysis, software design, coding, testing, maintenance.
Week 3 (15/01/2024 to 21/01/2024)	Software Development Process Models: Waterfall, Prototype.
Week 4 (22/01/2024 to 28/01/2024)	Evolutionary and Spiral models. Test of Unit 1, Software Requirement Analysis and Specifications: Feasibility Study.
Week 5 (29/01/2024 to 04/02/2024)	Software Requirements, Need for SRS, Characteristics of an SRS
Week 6 (05/02/2024 to 11/01/2024)	Components of an SRS, Structure of requirements document, validation and metrics,
Week 7 (12/02/2024 to 18/02/2024)	Problem analysis, Data Flow Diagram, Data Dictionary, Decision Table,
Week 8 (19/02/2024 to 25/02/2024)	Decision Trees. Assignment 1, Test of Unit 2. Software Project Planning: Process Planning Effort estimation
Week 9 (26/02/2024 to 03/03/2024)	COCOMO Model, Project Scheduling and Staffing, Team structure
Week10 (04/03/2024 to 10/03/2024)	Software configuration management, Quality assurance plans, Risk Management,
Week11 (11/03/2024 to 17/03/2024)	Project monitoring plans, Software Implementation and Maintenance
Week12 (18/03/2024 to 24/03/2024)	Testing fundamentals, Test oracle, Test Case and Test Criteria, Psychology of testing, Black Box Testing, Equivalence Class Partitioning
Week13 (25/03/2024 to 31/03/2024)	Boundary value analysis, Cause effect graphing, White box testing
Week14 (01/04/2024 to 07/04/2024)	Control flow based criteria, level of testing, Unit testing, Integration testing, System testing
Week15 (08/04/2024 to 14/04/2024)	Validation testing, alpha, beta and Acceptance testing
Week 16 & 17 (15/04/2024 to 28/04/2024)	Back log of chapter if any, discussion, and problems taken.

Lesson Plan (From January 2024 to May 2024)

Class: B.A./B.Sc. II- IV Sem.   **Paper: Computer Network**

Week	Contents
Week 1 (01/01/2024 to 07/01/2024)	Introduction to Communication and Network Technologies, Uses of Computer Networks, Network Devices, Nodes and Hosts.
Week 2 (08/01/2024 to 14/01/2024)	Computer Networks: Types and Topologies, OSI Reference Model
Week 3 (15/01/2024 to 21/01/2024)	TCP/IP Reference Model, Test of Unit 1. Representing Data as Analog and Digital Signals
Week 4 (22/01/2024 to 28/01/2024)	Data Rate, Bandwidth, Capacity, Baud Rate. Digital Carrier Systems, Guided and Unguided Wireless Transmission Media
Week 5 (29/01/2024 to 04/02/2024)	Communication Satellites, Switching, Multiplexing
Week 6 (05/02/2024 to 11/01/2024)	Assignment 1, Test of Unit 2. Data Link Layer: Framing, Flow Control
Week 7 (12/02/2024 to 18/02/2024)	Error Control, Error Detection and Correction
Week 8 (19/02/2024 to 25/02/2024)	Sliding window protocol, Media Access Protocol,
Week 9 (26/02/2024 to 03/03/2024)	Random Access Protocol, Token Passing Protocols, Token Ring
Week10 (04/03/2024 to 10/03/2024)	Ethernet, FDDI, Bluetooth, Wi-Fi
Week11 (11/03/2024 to 17/03/2024)	Test of Unit 3, Network Layer and Routing Concepts: Virtual Circuits and Diagrams
Week12 (18/03/2024 to 24/03/2024)	Routing Algorithms, Flooding, Shortest Path Routing
Week13 (25/03/2024 to 31/03/2024)	Distance Vector Routing, Link State Routing, Hierarchical Routing
Week14 (01/04/2024 to 07/04/2024)	Congestion Control Algorithm, Internetworking
Week15 (08/04/2024 to 14/04/2024)	IPV4, IPV6
Week 16 & 17 (15/04/2024 to 28/04/2024)	Assignment 2, Test, Back log of chapter if any, discussion, and problems taken.