BHAI GURDAS INSTITUTE OF ENGINEERING & TECHNOLOGY

Department of Computer Science and Engineering

LESSON PLAN

Subject Name: - Distributed Systems **Subject Code: -** BTIT607-18

Year: -2023 **Semester: - 6th IT**

Lecture No.	**Unit**	**Date/ Week**	Topic	**Teaching Aids**	**Reference**
L-1	1	7days	Introduction to Distributed systems, Operating Systems,	chalk, board-dustor chalk, board-dustor	Notes, text-book,
L-2			Types of distributed systems, Concurrent Programming,		
L-3			Characteristics & Properties of Distributes Systems –		
L-4			Taxonomy, Design goals – Transparency Issues. ;		
L-5			System architectures Centralized, Decentralized and Hybrid architecture		
L-6			Architectures versus middleware, Self-management in distributed systems.		
L-7			feedback control model.		
L-8	Unit-2		Processes and communication: Introduction to threads,		
L-9			Threads in distributed systems,		

L-10			role of virtualization in distributed systems		
L-11			Clients, Servers, Code migration and approaches to code migration		
L-12			Types of communication, Layered protocols and its types,		
L-13			Remote procedure call, Basic RPC operation, Parameter passing,		
L-14			Asynchronous RPC Message-oriented transient and persistent communication.		
L-15	Unit-3	7days	Naming and Synchronization:		
L-16			Names, identifiers, and addresses,		
L-17			concept of flat naming, Structured naming attribute based naming		
L-18			Coordination and clock synchronization		
L-19			Logical clocks, Mutual exclusion ,		
L-20			distributed mutual exclusion		
L-21			Global positioning of nodes and election algorithms		
L-22	Unit-4	7 days	Consistency and replication: Introduction, reasons for replication,		

L-23			Data-centric consistency models; Continuous consistency		
L-24			Sequential consistency, Causal consistency,		
L-25			Client-centric consistency, Eventual consistency		
L-26			Monotonic reads and writes		
L-27			Replica management; Replica-server placement,		
L-28			Content replication and placemen, Content distribution		
L-29	Unit-5	7days	Security and Fault tolerance		
L-30			Security threats, policies, and mechanisms		
L-31			Design issues, Cryptography		
L-32			Access control and Security management		
L-33			Introduction to fault tolerance,		
L-34			Process resilience		
L-35			Reliable group communication, Recovery.		