SUBJECT NO-CS60002, SUBJECT NAME- DISTRIBUTED SYSTEMS

LTP- 4-0-0,CRD- 4

SYLLABUS :-

Basic concepts. Models of computation: shared memory and message passing systems, synchronous and asynchronous systems. Logical time and event ordering. Global state and snapshot algorithms, mutual exclusion, clock synchronization, leader election, deadlock detection, termination detection, spanning tree construction. Programming models: remote procedure calls, distributed shared memory. Fault tolerance and recovery: basic concepts, fault models, agreement problems and its applications, commit protocols, voting protocols, checkpointing and recovery, reliable communication. Security and Authentication: basic concepts, Kerberos. Resource sharing and load balancing. Special topics: distributed objects, distributed databases, directory services, web services.References1.Mukesh Singhal and Niranjan Shivaratri, Advanced Concepts in Operating Systems, McGraw-Hill.2.Nancy Lynch, Distributed Algorithms, Morgan Kaufmann.3.Andrew S. Tanenbaum, Distributed Operating Systems, ACM Press.4.Jie Wu, Distributed Systems, CRC Press.5.Hagit Attiya, Jennifer Welch, Distributed Computing: Fundamentals, Simulations and Advanced Topics, McGraw-Hill.6.Sape Mullender (ed.), Distributed Systems, Addison-Wesley.