

CS-602: DISTRIBUTED OPERATING SYSTEM

Teaching and Examination Scheme:

Teaching Scheme			Credits	Marks			Duration of End Semester Examination
L	T	P/D		Sessional	End Semester Exams	Total	
3	0	0	3	40	60	100	3Hrs

COURSE OBJECTIVE:

This subject provides students with an in-depth knowledge about the operating system. It covers the distributed operating system in detail, including inter process communication, synchronization, shared memory and distributed file system.

COURSE CONTENT:

UNIT	CONTENT	No. of Hrs.
I	Introduction: Introduction to network operating system and distributed operating system, issues in the design of distributed operating systems, overview of computer networks. inter process communication, linux, IPC mechanism, remote procedure calls, RPC exception handling, security issues, RPC in heterogeneous environment (case study linux RPC)	10
II	Synchronization in Distributed Systems: Clock synchronization-logical and physical clocks, clock synchronization algorithms, mutual exclusion, election algorithms, deadlocks in distributed systems, thrashing, heterogeneous DSM, resource management (load balancing and load sharing approach), process management–process migration, thread.	10
III	Distributed Shared Memory: Introduction to shared memory, consistency model, page based distributed shared memory, shared variable distributed memory, object based distributed memory.	10
IV	Distributed File System: File models, file access, file sharing, file caching, file replication, fault tolerance, network file system, security in distributed file system.	9

Text Books:

1. Tanenbaum A, "*Distributed Operating System*", PHI

Reference Books:

1. A. Silberschatz, P.B. Galvin, "*Operating System Concepts*", John Wiley and Sons (Asia).



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H.P. Technical University
Hamirpur - 177001