



STANLEY
COLLEGE OF ENGINEERING & TECHNOLOGY FOR WOMEN
(Approved by AICTE , New Delhi | Affiliated to Osmania University ,Hyderabad)
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SE-574

DISTRIBUTED DATABASE SYSTEMS

UNIT- I

Distributed databases features - distributed database management systems - review of databases and computer networks, levels of distribution transparency. Reference architecture, type of data fragmentation, distribution transparency for read only applications and update applications. Distributed database access primitives and integrity constraints.

UNIT- II

Distributed database design, a frame work for distributed database design, the design of database fragmentation, the allocation of fragments. Translation global queries to fragment queries, equivalent transformation for queries. Transforming global Queries into fragment queries. Distributed grouping and aggregate function evaluation, parametric queries

UNIT- III

Query optimization, problems in query Optimization. objectives in query process optimization. simpler representation of queries, model for query optimization,- join query, general queries, Distributed Database administration: Catalog management in Distributed databases, Authorization and protection.

UNIT- IV

The Management of Distributed Transactions : A frame for Transaction Management, Supporting Atomicity of Distributed Transaction , Concurrency Control Based on Timestamps, Architectural Aspects of Distributed Transactions

UNIT- V

Concurrency Control: Foundations of Distributed Concurrency Control, Distributed Deadlocks
Concurrency Control Based on Timestamps, Optimistic Methods for Distributed Concurrency Control

Suggested Reading:

1. Ceri and Pelagatti, "*Distributed Databases*", Tata McGrawhill, 2008.
2. M. Tamer Ozsu, "*Principles of Distributed Database Systems*", 3rd Edition, Springer New York, 2011.
3. J. Ullman, "*Principles of Database and Knowledge-Base Systems*" Computer Science Press, New York, 1989.