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Paper-II: Database Management Systems

UNIT-I

Introduction : Purpose of the data base system, data abstraction, data model, data independence, data definition language, data manipulation language, data base administrator, data base users, overall structure.

ER Model : entities, mapping constrains, keys, E-R diagram, reduction E-R diagrams to tables, generatio, aggregation, design of an E-R database scheme.

UNIT-II

Relational Model : The catalog, base tables and views. Relational Data Objects - Domains and Relations: Domains, relations, kinds of relations, relations and predicates, relational databases.

Relational Data Integrity - Candidate keys and related matters: Candidate keys. Primary and alternate keys. Foreign keys, foreign key rules, nulls. Candidate keys and nulls, foreign key and nulls.

UNIT-III

The SQL Language: Data definition, retrieval and update operations. Table expressions, conditional expressions, embedded SQL.

Views: Introduction, what are views for, data definition, data manipulation, SQL support.

UNIT-IV

Network model : basic concepts, data structure diagrams, DBTG CODASYL model, DBTG data retrival facility, DBTG update facility, DBTG set processing facility, mapping networks to file, networks system.

Hierarchical model : basic concepts, tree structure diagrams, data retrieval facility, update facility, virtual records, maping hierarchical to files, hierarchical system.

UNIT-IV

File and system structure : overall system structure, file organisation, logical and physical file organization, sequential and random, hierarchical, inverted, multi list, indexing and hashing, B-tree index files.

Suggested Book

1. Date C.J., Database Systems, Addision Wesley.

2. Korth, Database Systems Concepts, McGraw Hill.