

Uka Tarsadia University



B.Com (Computer Application)

Database Management System (030100505)

5th Semester

Effective from July-2013

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Database Management System (030100505)

B.Com (Computer Application) (Sem.-5) Syllabus, effective from July-2013

Course Objective and Outcomes: To familiarize students with the database concept, architecture and languages and enable them to learn SQL and working of DBMS.

Total Hours: 52

[4 hrs. and 4 hrs practical per week]

Unit-1 Database Concepts

[Weightage 25%]

- 1.1. Database Concepts: Data, Information, Database Management System (DBMS)
- 1.2. Benefits of DBMS, Relational Database Management System (RDBMS), Difference of DBMS v/s RDBMS
- 1.3. Dr. E.F. Codd's Rules, Normalization –First Normal Form, Second Normal Form, Third Normal Form
- 1.4. Introduction to Structured Query Language (SQL), Features of SQL and SQL PLUS
- 1.5. Difference of SQL v/s SQL PLUS, Rules for SQL, Components of SQL

Unit-2 Database Language – Structured Query Language

[Weightage 25%]

- 2.1. Table Fundamentals, Basic Data types, Rules for creating tables, Inserting Data into tables
- 2.2. DDL Statements - Create, Alter, Drop, Truncate
- 2.3. DML Statements – Insert, Update, Delete
- 2.4. DQL Statements- Select, Select With Distinct, Order by, Where
- 2.5. DCL Statements- Commit, Savepoint, Rollback, Grant/Revoke

Unit-3 Database Constraints, Operators, Function

[Weightage 25%]

- 3.1. Database Constraints : Types of Constraints, Primary key, Foreign key, Unique key,
- 3.2. Business Rule Constraints – Column Level Constraints, Table Level Constraints, Null Value, Not Null, The check Constraints
- 3.3. Use of IN, BETWEEN and LIKE predicate, Arithmetic and Logical Operators
- 3.4. Function – Aggregate, Numeric, String, Date

Unit-4 Grouping and Joins

[Weightage 25%]

- 4.1. Grouping and Having Clause

- 4.2. Subqueries – with the FROM clause, Multi-column subquery, with ORDER BY clause, EXISTS / NOT EXISTS operator
- 4.3. Joins – Joining Multiple Tables (Equi Joins), Inner Joins
- 4.4. Outer Join, Cross Join

Text Book:

- 1. Ivan Bayross. *Sql,Pl/Sql The Programming Language of Oracle*. BPB PUBLICATION.

Reference Books:

- 1. Ramez Elmasri. *Fundamentals of Database Systems*. PEARSON