**OGE-105-DMS: Database Management System.**

**Unit-I** Database System Concepts & Architecture: Concept, Characteristics of database, Database system Vs file system, Introduction to DBMS, Advantages, Disadvantages of DBMS, Database users. Database System Concept & Architecture: Concept, schemas and instances, DBMS architecture & data independence, Components of DBMS.

**Unit-II** Data models: Data modeling using ER-Approach (Concept, ER-Notations, Entities, Entity types, Attributes, Attribute types, Relationships Keys concept). Relational Data Model: Concept, Relational model Constraints (Entity Integrity, Referential Integrity, Key Constraints, Domain Constraints),

**Unit-III** SQL- Introduction, Concept, Characteristics of SQL, Advantages of SQL, Data definition in SQL, literals, Operators, Specifying Constraints in SQL, Data manipulation in SQL, Queries: Insert, Update & Delete Operations.

**Unit-IV** Relational Database Design & Normalization: Concept of Functional dependencies (Fully, partial), Normalization of relational database, Norm forms (1NF, 2NF, 3NF)

**References:**

1. Elmarsi, Navathe, S B (2004) ,"Fundamentals of database Systems", Pearson Education.

2. Leon(2004), "Database Management Systems", Vikas Publications.

3. Silbebschatz, A. Korth, H,F. Sudarshan ,S (2006) ,"Database System Concepts", TMH .

4. Bayross. I, "Commercial Application Development using Oracle Developer 2000", BPB Pub.

5. Date, C J (2005), "An Introduction to Database Systems", Addison Wesley. 6. Desai, B C (2002), "An introduction to database Systems", Galgotia Publications.