

# SQL Syllabus

## **BASIC CONCEPTS**

- Database
- Concepts
- RDBMS Concepts
- Data Models
- Constraints
- Normalization- 1NF,2NF,3NF,BCNF etc
- ER Diagrams

## **SQL SERVER CONCEPTS**

- Introduction to Sql Server 2008 R2
- Sql Server 2008 Features
- Server Types
- Editions
- Components
- Management Studio
- T-SQL Features
- New Operators
- DML Statements

## **T-SQL**

- DDL
- Data Types
- System Defined Data Types
- User defined Data
- Create/modify/delete tables
- Operators
- DML
- DCL
- Using Select Statement

## **MAINTAINING DATABASE INTEGRITY**

- Constraints
- Rules
- Entity Integrity
- Domain Integrity
- Referential Integrity

## **SUBQUERIES**

- Built-in function
- Nested Sub Queries
- Correlated Sub Queries
- Derived tables
- Recursive queries
- Common Table Expression

## **JOINS**

- Cross Join, Inner Join, Self Join, Outer Join

## **INDEXES**

- Types of Indexes
- • Creating indexes
- Modifying indexes
- Dropping indexes

## **VIEWS**

- About View
- Creating Views
- Altering Views
- Materialized Views

- Distributed View

## **STORED PROCEDURES**

- Advantages
- System Stored Procedures
- Extended Stored Procedures
- Parameter Handling

## **USER DEFINED FUNCTIONS**

- Returning Scalar Value
- Returning Table of Data
- Deterministic Functions
- Non Deterministic Functions

## **TRIGGERS**

- Constraints Vs Triggers
- After Triggers
- Instead of Trigger
- DDL Triggers
- Altering and Dropping Triggers

## **CURSORS**

- Select Vs Cursors
- Types of Cursors
- Creating Cursors
- Open/Fetch/Close Cursors
- Using Cursors in Stored Procedures and Triggers

## **MICROSOFT .NET FRAME WORK INTEGRATION**

- CLR Integration
- UDA
- UDF
- Stored Procedures
- Triggers

## **TRANSACTIONS AND LOCKS**

- ACID Properties
- Implicit Transactions
- Explicit Transactions
- Transaction Process
- Concurrency Problems
- Lock Types
- Distributed Transactions
- Dead Locks

## **DATA TRANSFORMATION SERVICES**

- BCP
- DTS

## **ADMINISTRATIVE TASKS**

- Creating Database
- Copy, Maintaining Database
- Security Concepts
- Schemas, Permissions
- Backup and Restore Database
- Sql Server Agent
- Sql Server Profiler
- Database Engine Tuning Adviser

## **SQL SERVER MANAGEMENT OBJECTS**

- Programming with SMO
- Connecting to Sql Server
- Scripting

## **XML IN SQL SERVER**

- XML in Sql Server

## **WORKING WITH IMAGES**

- Working with Images

## **INTRODUCTION TO MS- BI**

- SSRS
- Standard, Ad- hoc Embedded Reports
- SSIS
- SSAS

## **SQL SERVER 2012 FEATURES**

- Sequence
- OFFSET and FETCH
- WITH RESULT SETS in stored procedure THROW in triggers