1. **Unix Essentials**
2. **Introduction to Oracle – SQL**
3. **Oracle Database 11g DBA:**
   1. **Exploring the Oracle Database Architecture**

An Overview of Databases and Instances, Oracle Logical Storage Structures – Tablespaces, Blocks, Extents, Segments, Tables, Views, Constraints, Indexes, Users and Schemas, Profiles, Sequences, Synonyms. Oracle Physical Storage Structures – Datafiles, Redolog Files, Control Files, Archived Log Files, Initialization Parameter Files, Alert and Trace Log Files, Backup Files, Oracle Managed Files, Password Files, Multiplexing Datafiles, Automatic Storage Management. Oracle Memory Structures – System Global Area, Program Global Area, Background Process.

* 1. **Preparing the Database Environment**

Creating Database – Manually Creating the Database, Creating the Database Using DBCA

* 1. **Tablespace Management**

Tablespace Architecture – Tablespace Types, SYSTEM, SYSAUX, TEMP, UNDOTBS Tablespaces, Segment Segregation

* 1. **Managing the Database Storage Structures**

Resizing Tablespaces and Datafiles, Moving Datafiles, Moving Redolog Files, Control Files. Automatic Storage Management – ASM Architecture, Creating ASM instance.

* 1. **Managing Space Usage**

Common Space Management Problems – Running Out of free space in a Tablespace, Fragmented Tablespaces and Segments, Oracle Segments, Extents and Blocks. Data Dictionary Views and Dynamic Views – DBA\_TABLESPACES, DBA\_SEGMENTS, DBA\_EXTENTS, DBA\_FREE\_SPACE. Space Management Methodologies – Locally Managed Tablespaces, Using OMF to Manage Space, Bigfile Tablespaces, Automatic Storage Management, Undo Management

* 1. **Administering User Security**

User Accounts, System Privileges, Object Privileges, Profile Management, Creating Assigning and Maintaining Roles

* 1. **Configuring Oracle Network Environment**

Overview of Oracle Net, Configuring the listener, Starting the listener. Configuring tnsnames. Database links, Debugging Oracle Net

* 1. **Managing Transaction with Undo Tablespaces**

Transactions Basics, Undo Basics, Rollback, Read Consistency, Database Recovery, Flashback Operations. Managing Undo Tablespaces – Creating Undo Tablespace, Undo Tablespace Dynamic Performance Views, Multiple Undo Tablespaces, Sizing and Monitoring the Undo Tablespaces

* 1. **Backup and Recovery Concepts**

Logical Backups – Export, Import, Data Pump. Physical Backups – Offline Backups, Online Backups

* 1. **RMAN Backup Concepts**

RMAN Componets, RMAN Vs. Traditional Backup Methods, Overview of RMAN Commands, Frequently used commands, Setting up a Repository, Registering a Database, Full Database Backup, Tablespaces, Datafiles, Image Copies, Controlfile and SPFILE backup. Recovery Operations – Restoring a controlfile, Tablespace, Datafile, Entire Database

* 1. **Performance Tuning**

Tuning SQL – Generating Explain Plans, Managing Indexes. Memory Tuning – Specifying the size of the SGA, Using the Cost Bases Optimizer. Tuning Application – Effective Table Design, Distribution of CPU requirements. Tuning Data Access – Locally Managed Tablespaces, Identifying Chained Rows, Increasing the Oracle Block Size. Using STATSPACK and Automatic Workload Repository, Generating AWR Reports.

* 1. **Oracle Data Guard**

Data Guard Architecture – Physical Vs. Logical Standby Databases, Data Protection Modes, Creating the Standby Database Configuration, Preparing the Primary Database, Creating Logical Standby Databases. Managing Switchovers and Failovers – Switchovers to Physical Standby Databases, Switchovers to Logical Standby Database, Failovers to Physical Standby Databases, Failovers to Logical Standby Databases.

* 1. **Installing Oracle 11g**

Using OUI to Install the Oracle Software, Using the DBCA to Create a Database, Manually Creating the Database.