# Oracle 19c Database Administration I (DBA I)

## Course Agenda

1. **Oracle Database Architecture**

- Oracle Database Server Architecture
- Oracle Database Instance Configurations
- Connecting to the Database Instance
- Oracle Database Memory Structures

2. **Creating DBCS Database Deployments**

- Automated Database Provisioning
- Creating a Database Deployment

3. **Accessing an Oracle Database**

- Connecting to an Oracle Database Instance
- Oracle Database Tools
- SQL*Plus
- Oracle SQL Developer
- SQL Developer Command Line (SQLcl)
- Database Configuration Assistant (DBCA)
- Oracle Enterprise Manager Database Express
- Enterprise Manager Cloud Control 13c Features

4. **Managing DBCS Database Deployments**

- Managing the Compute Node
- Scaling a Database Deployment
- Patching DBCS

5. **Managing Database Instances**

- Working with Initialization Parameters
- Starting the Oracle Database Instance
- Shutting Down an Oracle Database Instance
- Opening and Closing PDBs
- Alert Log

- Trace Files
- DDL Log File

6. **Oracle Net Services**

- Oracle Net Services
- Oracle Net Listener
- The Default Listener
- Establishing Oracle Network Connections
- Connecting to an Oracle Database

7. **User Security**

- Database User Accounts
- Oracle-Supplied Administrator Accounts
- Creating Oracle Database Users in a Multitenant Environment   -9
- Schema-Only Account
- Authenticating Users
- System Privileges for Administrators
- Object Privileges
- Granting Privileges in a Multitenant Environment
- Granting and Revoking System Privileges
- Granting and Revoking Object Privileges

8. **Creating PDBs**

- Creating a New PDB from PDB$SEED
- Cloning PDBs
- Unplugging and Plugging in PDBs
- Plugging an Unplugged Regular PDB into a CDB

9. **Creating and Managing Tablespaces**

- Creating Tablespaces
- Creating Permanent Tablespaces in a CDB
- Altering and Dropping Tablespaces
- Viewing Tablespace Information
- Tablespace Encryption by Default in DBCS

10. **Managing Storage Space**

- Space Management Features
- Block Space Management
- Row Chaining and Migration
- Types of Segments
- Allocating Extents

11. **Managing Undo Data**

- Undo Data

12. **Moving Data**

- Oracle Data Pump
- SQL Loader

13. **Backup and Recovery Concepts**

- Types of Failures
- Instance Recovery
- The Checkpoint (CKPT) Process
- Redo Log Files and the Log Writer (LGWR)
- Automatic Instance Recovery or Crash Recovery
- Using the MTTR Advisor
- Complete Recovery Process
- The Point-in-Time Recovery Process
- Flashback

14. **Backup and Recovery Configuration**

- Configuring for Recoverability
- Redo Log Files

15. **Creating Database Backups**

- RMAN Backup
- Backing Up Databases on DBCS

## 16. Performing Database Recovery

- Data Recovery Advisor
- Loss of a Control File
- Loss of a Redo Log File
- DBCS: Performing Recovery by Using the Console
- dbaascli Utility

## 17. Monitoring and Tuning Database Performance

- Automatic Workload Repository (AWR)
- Automatic Database Diagnostic Monitor (ADDM)
- Advisory Framework

## 18. Tuning SQL

- SQL Tuning Process
- Oracle Optimizer
- Optimizer Statistics
- SQL Plan