

# Oracle DBA Certification

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- Apply conditional expressions in a SELECT statement

## Sql Fundamental

### Retrieving Data Using the SQL SELECT Statement

- List the capabilities of SQL SELECT statements
- Execute a basic SELECT statement

### Reporting Aggregated Data Using the Group Functions

- Identify the available group functions
- Describe the use of group functions
- Group data by using the GROUP BY clause
- Include or exclude grouped rows by using the HAVING clause

### Restricting and Sorting Data

- Limit the rows that are retrieved by a query
- Sort the rows that are retrieved by a query
- Use ampersand substitution to restrict and sort output at runtime

### Displaying Data from Multiple Tables

- Write SELECT statements to access data from more than one table using equijoins and nonequijoins
- Join a table to itself by using a self-join
- View data that generally does not meet a join condition by using outer joins
- Generate a Cartesian product of all rows from two or more tables

### Using Single-Row Functions to Customize Output

- Describe various types of functions available in SQL
- Use character, number, and date functions in SELECT statements

### Using Subqueries to Solve Queries

- Define subqueries
- Describe the types of problems that the subqueries can solve
- List the types of subqueries
- Write single-row and multiple-row subqueries

### Using Conversion Functions and Conditional Expressions

- Describe various types of conversion functions that are available in SQL
- Use the TO\_CHAR, TO\_NUMBER, and TO\_DATE conversion functions

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## Using the Set Operators

- Describe set operators
- Use a set operator to combine multiple queries into a single query
- Control the order of rows returned

## Manipulating Data

- Describe each data manipulation language (DML) statement
- Insert rows into a table
- Update rows in a table
- Delete rows from a table
- Control transactions

## Using DDL Statements to Create and Manage Tables

- Categorize the main database objects
- Review the table structure
- List the data types that are available for columns
- Create a simple table
- Explain how constraints are created at the time of table creation
- Describe how schema objects work

## Creating Other Schema Objects

- Create simple and complex views
- Retrieve data from views
- Create, maintain, and use sequences
- Create and maintain indexes
- Create private and public synonyms

## 11g Administration I

### Exploring the Oracle Database Architecture

- Explain the Memory Structures
- Describe the Process Structures
- Overview of Storage Structures

### Preparing the Database Environment

- Identify the tools for Administering an Oracle Database
- Plan an Oracle Database installation
- Install the Oracle software by using Oracle Universal Installer (OUI)
- Creating an Oracle Database
- Create a database by using the Database Configuration Assistant (DBCA)

### Managing the Oracle Instance

- Setting database initialization parameters
- Describe the stages of database startup and shutdown
- Using alert log and trace files
- Using data dictionary and dynamic performance views

### Configuring the Oracle Network Environment

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- Configure and Manage the Oracle Network
- Using the Oracle Shared Server architecture

- Configure multiple archive log file destinations to increase availability
- Define, apply and use a retention policy
- Configure the Flash Recovery Area
- Use Flash Recovery Area

## Managing Database Storage Structures

- Overview of tablespace and datafiles
- Create and manage tablespaces
- Space management in tablespaces

## Using the RMAN Recovery Catalog

- Identify situations that require RMAN recovery catalog
- Create and configure a recovery catalog
- Synchronize the recovery catalog
- Create and Use RMAN stored scripts
- Back up the recovery catalog
- Create and use a virtual private catalog

## Administering User Security

- Create and manage database user accounts
- Grant and revoke privileges
- Create and manage roles
- Create and manage profiles

## Configuring Backup Specifications

- Configure backup settings
- Allocate channels to use in backing up
- Configure backup optimization

## 11g Administration II

## Database Architecture and ASM

- Describe Automatic Storage Management (ASM)
- Set up initialization parameter files for ASM and database instances
- Start up and shut down ASM instances
- Administer ASM disk groups

## Using RMAN to Create Backups

- Create image file backups
- Create a whole database backup
- Enable fast incremental backup
- Create duplex backup and back up backup sets
- Create an archival backup for long-term retention
- Create a multisection, compressed and encrypted backup

## Configuring for Recoverability

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- Report on and maintain backups
- Identify the situations that require TSPITR
- Perform automated TSPITR

## Performing User-Managed Backup and Recovery

- Recover from a lost TEMP file
- Recover from a lost redo log group
- Recover from the loss of password file
- Perform user-managed complete database recovery
- Perform user-managed incomplete database recovery
- Perform user-managed and server managed backups
- Identify the need of backup mode
- Back up and recover a control file

## Using RMAN to Perform Recovery

- Perform complete recovery from a critical or noncritical data file loss using RMAN
- Perform incomplete recovery using RMAN
- Recover using incrementally updated backups
- Switch to image copies for fast recovery
- Restore a database onto a new host
- Recover using a backup control file
- Perform Disaster recovery
- Using RMAN to Duplicate a Database
- Creating a duplicate database
- Using a duplicate database
- Performing Tablespace Point-in-Time Recovery

## Monitoring and Tuning RMAN

- Monitoring RMAN sessions and jobs
- Tuning RMAN
- Configure RMAN for Asynchronous I/O

## Using Flashback Technology

- Restore dropped tables from the recycle bin
- Perform Flashback Query
- Use Flashback Transaction

## Additional Flashback Operations

- Perform Flashback Table operations
- Configure, Monitor Flashback Database and Perform Flashback Database operations
- Set up and use a Flashback Data Archive

## Diagnosing the Database

- Set up Automatic Diagnostic Repository
- Using Support Workbench
- Perform Block Media Recovery

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- Create and use Database Resource Manager Components

## Automating Tasks with the Scheduler

- Create a job, program, and schedule
- Use a time-based or event-based schedule for executing Scheduler jobs
- Create lightweight jobs
- Use job chains to perform a series of related tasks

## Administering the Scheduler

- Create Windows and Job Classes
- Use advanced Scheduler concepts to prioritize jobs