

Nutech Computer Training Institute

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Oracle OCP/DBA 11G Certification

Total Hours: 76 hrs

Tuition Fee: \$3500.00

Registration Fee: \$60.00/package

Testing Fee: \$375

Starting Date: Aug. 8, 2009

Oracle Certified Associate

Oracle Certified Professional

OCA Oracle Database 11g: SQL Fundamentals I (Exam 1Z0-051)

- SQL SELECT statements
- Restricting and sorting data
- Single-row functions
- Conversion functions and conditional expressions
- Group functions
- Displaying data from multiple tables
- Subqueries
- Set operators
- DML and DDL statements
- Schema objects

Course Content

SQL SELECT Statements

- List the Capabilities of SQL SELECT Statements
- Execute a Basic SELECT Statement

Restricting and sorting data

- Limit the Rows Retrieved by a Query
- Sort the Rows Retrieved by a Query
- Ampersand substitution

Conversion functions and conditional expressions

- Describe Various Types of Conversion Functions Available in SQL
- Use the TO_Char, TO_Number, and TO_Date Conversion Functions
- Apply Conditional Expressions in a SELECT Statement

Group Functions

- Describe the group functions
- Identify the Available the Group Functions
- Group Data Using the GROUP BY Clause
- Include or Exclude Grouped Rows using the HAVING Clause

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 Using a Self-join
- View Data that Does not meet a join condition
- Generate a Carresian Product of two or more tables

Subqueries

- Define Subqueries
- Describe the types of problems that the Subqueries can solve
- List the type of Subqueries
- Write Single-Row and Multiple-Row Subqueries

Set Operators

- Describe the Set Operators
- Use a Set Operator to Combine Multiple Queries
- Control the order of rows returned

DML and DDL statement

- 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

Schema Objects

- Create simple and complex views

Retrieve Data from views
Create private and public Synonyms
Create, Maintain and use Sequences
Create and maintain Index

OCA Oracle Database 11g: Administration I Exam Guide (Exam 1Z0-052)

- Database architecture
- Creating an Oracle Database
- Managing the Oracle instance
- Configuring and managing the Oracle network
- Managing database storage structures
- Administering user security
- Managing schema objects, data and concurrency, and undo data
- Implementing Oracle Database security
- Database maintenance and performance management
- Backup and recovery
- Moving data
- Intelligent infrastructure enhancements

Course Content

Database Architecture

Outline the Oracle Architecture and its main Components
Explain the Oracle instance architecture

Creating an Oracle Database

Use DBCA to Create a database
Use DBCA to Delete a database
Use DBCA to manage templates

Managing the Oracle Instance

- Use Enterprise Manager
- Use SQL*Plus and iSQL*Plus to access the Oracle Database
- Modify database initialization parameters
- Describe the stages of database startup
- Describe the database shutdown options
- View the database alert log
- Use dynamic performance views

Managing Database Storage Structures

- Describe how table row data is stored in blocks
- Define the purpose of tablespaces and data files
- Explain space management in tablespaces
- Create tablespaces
- Manage tablespaces: alter, drop, take offline, put online, add data files, make read-only or read-write, generate DDL
- Obtain tablespace information
- Explain key features and benefits of ASM

Administering User Security

- Create and manage database user accounts
- Create and manage roles
- Grant and revoke privileges
- Create and manage profiles
- Managing Schema Objects
- Create and modify tables
- Define constraints and states of constraints
- Dropping and truncating tables
- Create and use B-Tree and Bitmap indexes
- Create Views
- Create sequences
- Use data dictionary

Managing Schema Objects, Data and Concurrency, and undo data

- Manipulate data through the use of SQL
- Identify and administer PL/SQL objects
- Describe triggers and triggering events
- Define levels of locking
- List possible causes of lock conflict
- Monitor and resolve lock conflicts

Implementing Oracle Database Security

- Apply the principle of least privilege
- Audit database activity
- Implement Fine-Grained Auditing

Database maintenance and performance management

- Gather optimizer statistics
- Manage the Automatic Workload Repository

Use the Automatic Database Diagnostic Monitor (ADDM)
Set warning and critical alert thresholds
React to performance issues
Performance Management
Use enterprise manager to view performance
Tune SQL by using SQL tuning advisor
Tune SQL by using SQL access advisor
Use automatic shared memory management
Use the memory advisor to size memory buffer

Backup and Recovery

Describe the types of failure that may occur in an Oracle Database
Identify the importance of checkpoints, redo log files, and archived log files
Tuning instance recovery
Configure a database for recoverability
Configure ARCHIVELOG mode

Performing Flashback

Describe flashback database
Restore the table contents to a specific point in time
Recover from a dropped table
Use Flashback Query to view the contents of the database as of any single point of time
View transaction history or row with flashback transaction query

Moving Data

Describe the general architecture of Data Pump
Use Data Pump export and import to move data between Oracle databases
Load data with SQL Loader
Use external tables to move data

Intelligent infrastructure enhancements

Use the Enterprise Manager support workbench
Manage Patches

OCP Oracle Database 11g: Administration II Exam Guide (Exam 1Z0-053)

- Database structure and Oracle Automatic Storage Management

- Configuring database recoverability
- Oracle Recovery Manager (RMAN)
- Oracle Flashback Memory management techniques
- Database tuning advisors
- Disk space and resource management
- Configuring database diagnostics
- Administering the Oracle Scheduler
- Database globalization

Course Content

Database structure and Oracle Automatic Storage Management

Use the Database Advisors to gather information about your database
 Use the SQL Tuning Advisor to improve database performance
 Use automatic undo retention tuning Using Recovery Manager
 Use the RMAN BACKUP command to create backup sets and image copies
 Enable block change tracking
 Manage the backups and image copies taken with RMAN with the LIST and REPORT Commands

Configuring database recoverability

Configure database parameters that affect RMAN operations
 Change RMAN default settings with CONFIGURE
 Manage RMAN's persistent settings
 Start RMAN utility and allocate channels

Oracle Recovery Manager (RMAN)

Recover the control file
 Explain reasons for incomplete recovery
 Perform incomplete recovery using EM
 Perform incomplete recovery using RMAN
 Perform incomplete recovery using SQL
 Perform database recovery following a RESETLOGS operation

Oracle Flashback Memory management techniques

Determine which flashback technology to use for each recovery situation
 Configure and sue Flashback Database
 Monitor the Flashback Database
 Use the Enterprise Manager Recovery Wizard to flashback database
 Manage (or maintain) the Flash Recovery Area

Database tuning advisors

- Tune redo writing and archiving operations
- Issue statements that can be suspended upon encountering space condition errors
- Tuning space-related error conditions by proactively managing tablespace usage
- Tuning wasted space from tables and indexes using the segment shrink functionality
- Estimate the size of new table and indexes
- Use different storage options to improve the performance of queries
- Rebuild indexes online

Disk space and resource management

- Set up initialization parameter files for ASM and database instances
- Execute SQL commands with ASM file names
- Start up and shut down ASM instances
- Administer ASM disk groups
- Use RMAN to migrate your database to ASM

Configuring database diagnostics

- Use the alert log and database trace files for diagnostic purposes
- View alerts using Enterprise Manager
- Adjust thresholds for tracked metrics
- Control the size and location of trace files

Administering the Oracle Scheduler

- Simplify management tasks by using the Scheduler
- Create a job, program, schedule, and window
- Reuse Scheduler components for similar tasks
- View information about job executions and job instances

Database globalization

- Customize language-dependent behavior for the database and individual sessions
- Specify different linguistic sorts for queries
- Use datatime datatypes
- Query data using case insensitive and accent insensitive searches
- Obtain Globalization support configuration information