This Training Program on **ORACLE 11g Administration, PL/SQL Programming and Database Security** is specially designed for OCA (ORACLE CERTIFIED ASSOCIATE) for those who want to master in database. Apart from general database designing concepts it include detailed description of SQL performance tuning, oracle security and optimized query development. Course includes both theoretical and practical aspect of the technology with proper lectures, assignments, labs and Project.

After completing this Training you are ready to:

1. Appear in Technical round in any company.
2. Appear exams on ORACLE DATABASE under any technical university of India.
3. Develop business models, Database, forms and reports development.
4. Appear for OCA exam.
5. Update yourself with Advance concepts of ORACLE DATABASE and PL/SQL.

### Course Contents

#### Module I

- Introduction to DBMS, What is DBMS, Relational Data Models, and Data integrity rules, Normalization, Introduction to data processing methods, Client/Server, Oracle Architecture, What is grid computing?

#### Module II

- SQL,Creating Tables, Integrity Constraints
- Adding, updating and dropping columns
- Transaction and locking, Functions
- Grouping data, Using ROLLUP and CUBE
- Joing tables, ANSI Join ,Sub queries, working with TOPn analysis
- Views, Materialized Views
- Using indexes and clusters
- Index Skip Scan
- Security
- Report generation using SQL*Plus commands
- Distributed databases
- Partitioning
- List partitioning
- Lobs

#### Module III

- PL/SQL Programming
- What is PL/SQL, Structure of PL/SQL block
- Control statement, CASE expression
- Exception handling, Cursor handling
- Writing stored procedures and functions
- Definer rights vs. Invoker's rights
- Autonomous transactions
- Database triggers
- Native dynamic SQL
- Flashback query
- MERGE statement
- Multitable insert
- Using Regular Expressions

#### Module IV

- Exploring the Oracle Database, Architecture, Oracle Database Architecture Overview, Oracle ASM Architecture Overview, Process Architecture, Memory structures Logical and physical storage structures
- Use of Latest Tools & Technology
- LAB Assistance

### How to Apply:

For Admission, submit completely filled in application form along with course fee either in Cash or Demand Draft in favor of “NIELIT, Gorakhpur”. The application form may be downloaded from our website or collected from reception.

### Eligibility

- B.TECH. (CS/IT/EC) or MCA/M.Sc. (IT/CS/Electronics), BCA/PGDCA, Diploma in Computer/Electronics Stream, B.Sc. or B.A, A/B/C Level, Working Professional.
- Basic knowledge of computing is desirable

### Accommodation:

Hostel accommodation is available for Male candidates only.

### Training Highlights:

- Well Managed Course pattern
- Daily Handouts & Lab Exercise
- Industry Compliant Syllabus

### Duration

- 4 Weeks

### Starting Date

- 12 January 2015

### Seats

- 30

### Fees

- RS. 6,500=00/-

### ASM storage components

- Module V
  - Installing Oracle Software
  - Tasks of an Oracle Database Administrator
  - Tools Used to Administer an Oracle Database
  - Installation: System Requirements
  - Oracle Universal Installer (OUI)
  - Installing Oracle Grid Infrastructure
  - Installing Oracle Database Software

- Module VI
  - Creating an Oracle Database
  - Planning the Database
  - Using the DBCA to Create a Database
  - Password Management
  - Creating a Database Design Template
  - Using the DBCA to Delete a Database

- Module VII
  - Managing the Oracle Database
  - Instance, Start and stop the Oracle database and Components, Use Oracle Enterprise Manager
  - Access a database with SQLPlus
  - Modify database installation parameters
  - Describe the stages of database startup
  - Describe database shutdown options
  - View the alert log
  - Access dynamic performance views

- Module VIII
  - Configuring the Oracle Network Environment
  - Use Enterprise Manager to create and configure the Listener ,Enable Oracle Restart to monitor the listener ,Use tnsping to test Oracle Net connectivity
  - Identify when to use shared servers and when to use dedicated servers

- Module IX
  - Managing Database Storage
  - Structures Storage Structures
  - How Table Data Is Stored
  - Anatomy of a Database Block
  - Space Management in Tablespaces
  - Tablespaces in the Preconfigured Database
  - Actions with Tablespaces Oracle Managed Files(OMF)

- Module X
  - Administering User Security
  - Database User Accounts
  - Predefined Administrative Accounts
Benefits of Roles, Predefined Roles
Implementing Profiles

Module XI
Managing Data Concurrency, Data Concurrency, Enqueue Mechanism, Resolving Lock Conflicts, Deadlocks

Module XII
Managing Undo Data, Data Manipulation, Transactions and Undo Data, Undo Data Versus Redo Data, Configuring Undo Retention

Module XIII
Implementing Oracle Database Auditing, Describe DBA responsibilities for security, Enable standard database auditing, Specify audit options, Review audit information, Maintain the audit trail

Module XIV
Database Maintenance
Manage optimizer statistics
Manage the Automatic Workload Repository (AWR), Use the Automatic Database Diagnostic Monitor (ADDM), Describe and use the advisory framework
Set alert thresholds, Use server generated alerts
Use automated tasks

Module XV
Performance Management Performance Monitoring
Managing Memory Components
Enabling Automatic Memory Management (AMM), Automatic Shared Memory Advisor
Using Memory Advisors, Dynamic Performance Statistics, Troubleshooting and Tuning Views
Invalid and Usable Objects

Module XVI
Backup and Recovery Concepts Part of Your Job
Statement Failure, User Error
Understanding Instance Recovery
Phases of Instance Recovery
Using the MTTR Advisor
Media Failure
Archive Log Files

Module XVII
Performing Database Backups
using RMAN Backup Solutions: Overview
Oracle Secure Backup, User Managed Backup
Terminology, Recovery Manager (RMAN)

Configuring Backup Settings
Backing up the Control File to a Trace File
Monitoring the Flash Recovery Area

Module XVIII
Performing Database Recovery Opening a Database
Data Recovery Advisor, Loss of a Control File
Loss of a Redo Log File, Data Recovery Advisor
Data Failures, Listing Data Failures
Data Recovery Advisor Views

Module XIX
Data Replication Describe ways to move data
Create and use directory objects
Use SQL*Loader to move data
Use external tables to move data
General architecture of Oracle Data Pump
Use Data Pump export and import to move data

Module XX
Managing Security for Oracle Database Users
Configuring Authentication, Configuring Privilege and Role, Authorization, Managing Security for Application Developers, Using Application Contexts to Retrieve User Information, Using Oracle Virtual Private Database to Control Data Access, Developing Applications Using the Data Encryption API, Verifying Security Access with Auditing, Keeping Your Oracle Database Secure

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