CMIT COMPUTER INSTITUTE

Building Bright Careers Since 1989

PL-SQL Syllabus (OCA)

1. **Introduction**
   - Introduction to PL/SQL
   - PL/SQL Execution Environment
   - PL/SQL Development Environment
   - Introduction to PL/SQL Procedures
   - Introduction to PL/SQL Functions
   - Introduction to PL/SQL Packages
   - Introduction to PL/SQL Triggers
   - Coding PL/SQL
   - The correct structure of a PL/SQL program block
   - Declare and initialize a variable
   - Declare and initialize data types and Boolean variables
   - Summary

2. **Decision Making**
   - IF Statement
   - IF ELSE Statement
   - IF-ELSIF Statements
   - Summary

3. **Loops**
   - Implement suitable control structures in PL/SQL
   - Implement a suitable loop construct in PL/SQL for a given scenario
   - Characteristics of FOR and nested loops in PL/SQL
   - Implementation of WHILE LOOP
   - Implementation of DO WHILE LOOP
   - EXIT Keyword
   - GOTO Statement
   - Summary

4. **Sub Blocks**
   - What is Sub Block?
   - Sub Blocks implementation
   - Modular Programming
   - Create and populate a user-defined record in PL/SQL
   - Create a record using the %ROWTYPE attribute and use it to insert and update a row
   - Create a record and use it to update a table
   - Summary

5. **Cursors**
   - What is Cursor?
   - Cursor Types

Implicit Cursor
Use explicit cursors to retrieve data
Cursor attributes
For Loop Cursors
Advantages of For Loop Cursors
Default values in cursors
Use parameters to make cursors reusable in a given scenario
Use an explicit cursor to retrieve and update data
Summary

6. **Exceptions**
   What is Exception?
   Exception Section
   About The Exception Section
   Isolating the Specific Exception
   Outline how each of the PL/SQL exception types are raised and handled
   Trap predefined and non-predefined exceptions in PL/SQL
   Trap user-defined exceptions and identify error codes and messages
   Use nested blocks and the RAISE_APPLICATION_ERROR procedure when handling exceptions in PL/SQL
   Handle exceptions in PL/SQL
   Pragma Exception_Init
   SQLcode & SQLerrm Example
   SQL%Rowcount
   Summary

7. **Stored Procedures**
   Create, remove, and view PL/SQL stored procedures
   Use IN, OUT, and IN OUT parameter modes to pass values to and from stored procedures and programs
   Create stored procedures with suitable parameters
   Assign values to multiple parameters
   Summary

8. **Stored Functions**
   Create a stored function
   Execute a stored function
   Call, remove, and view stored functions in PL/SQL
   Summary

9. **Managing Subprograms**
   Definer Rights
   Invoker rights
   List all Procedures and Functions
   Summary

10. **Packages**
    Identify features of PL/SQL packages
    Sequence steps for developing PL/SQL packages

Identify the syntax for creating a PL/SQL package
Identify tasks involved in managing PL/SQL packages
Identify features of the overloaded subprograms contained in PL/SQL packages
Identify features of forward referencing in PL/SQL packages
Summary

11. Managing LOBs

Identify features of the DBMS_LOB package
Identify the code to work with Large Object (LOB) values
Identify methods of selecting Character Large Object (CLOB) values
Identify features of temporary Large Objects (LOBs)
Summary

12. Triggers

Identify features of triggers
Identify the code to create a Data Manipulation Language (DML) trigger
Identify the code to create a Data Manipulation Language (DML) row trigger
Match the options for managing triggers with their descriptions
Identify guidelines for testing triggers
Identify the benefits of triggers in different business application scenarios
Identify the syntax for creating triggers for DDL and system events
Summary

13. Advanced Triggers

Creating Trigger on DDL Statements
LOGON & LOGOFF Trigger example
Advantages of trigger
Conditional Security
Summary

Course Duration	Course Fees
8 weeks of 1 hr. each	18000