

Teradata 14 Certification Exams Objectives

The high level objectives represent the general content areas. The more detailed information below the objective indicates representative topic areas. All Teradata 14 functions and features that fall within the stated objective areas are eligible topics on an exam.

TE0-142 Teradata 14 SQL

- Basic Teradata Extensions
 - Describe usage of HELP, SHOW, and EXPLAIN commands and their expected outputs.
 - List the differences between ANSI and Teradata modes in the areas of transaction protocol, defaults, conversions, and table creation.
 - Describe usage of built-in Teradata key words (e.g., CURRENT_DATE).
- Data Definition Language (DDL) (Non-Temporal)
 - Given a CREATE TABLE statement without a primary index declared, identify the column that Teradata will select as the primary index.
 - Describe the attributes and constraints for a column in a table.
 - Given a scenario, identify considerations using a CREATE TABLE AS definition.
 - Given a scenario, identify the type of table that should be used (global temporary, volatile, and permanent).
- Data Manipulation Language (DML) (Non-temporal)
 - Identify a correctly written INSERT statement.
 - Identify a correctly written UPDATE statement.
 - Identify a correctly written DELETE statement.
 - Identify a correctly written SELECT statement.
 - Identify a correctly written MERGE INTO statement.
- Views and Macros (Non-temporal)
 - Identify uses of simple and parameterized macros.
 - Identify the benefits of using views and macros.
 - Identify the restrictions of creating views and macros.
 - Describe the impact of using an access lock in a view or macro.

- Logical and Conditional Expressions
 - Identify the correct use of comparison operators in logical expressions.
 - Evaluate expressions involving NULLs.
 - Identify the correct use of multiple logical expressions in a conditional expression using AND, OR, NOT.
 - Identify the correct use of the IN, NOT IN logical predicate.
- Data Conversions and Computations
 - Given a scenario, identify the ramifications of implicit conversions from one data type to another.
 - Given a scenario, identify the ramifications of explicit conversions from one data type to another.
 - Given a scenario using CAST, identify the proper result.
 - Identify the characteristics of ANSI CAST and Teradata extensions for data conversion.
- CASE Expressions
 - Given a scenario, identify the result of the CASE expression.
 - Given a scenario, identify the use of different forms (searched and valued) of the CASE expression.
 - Given a scenario, identify the use of specialized functions (COALESCE, NULLIF) of the CASE expression.
- Subqueries and Correlated Subqueries
 - Given a scenario, identify the SQL statement for a correlated subquery to qualify a subset of data.
 - Given a scenario, identify the SQL statement for a noncorrelated subquery to qualify a subset of data.
 - Given a scenario, identify the SQL statement for a correlated scalar subquery to qualify a subset of data.
 - Given a scenario, identify the SQL statement for a noncorrelated scalar subquery to qualify a subset of data.
 - Identify the characteristics of a scalar subquery.
- Joins (Non-temporal)
 - Given a scenario, determine the type of join to code to get the desired result set.
 - Identify proper and improper use of aliasing in table joins.
 - Given a scenario, identify the evaluation order of various join types.

- Given a scenario, identify the use of a derived table using single or multiple WITH form.
- Given a scenario, identify the use of a derived table using the FROM clause form.
- Given a scenario, identify the use of a derived table using a recursive WITH form.
- Identify the characteristics of outer joins.
- Attribute and String Functions
 - Identify the attribute functions and identify how they work within SQL.
 - Identify the correct use of string manipulation functions and attributes.
 - Identify formatting options for internationalization of various data types.
 - Identify the correct use of new embedded services functions (e.g., TO_CHAR, TO_NUMBER, NVL, etc.)
- Set Operations
 - Given a Venn diagram, identify the set operator.
 - Given a request and a set operator, identify the outcome.
- Analytical Functions
 - Describe the functionality of Ordered Analytic Functions.
 - Describe the functionality of RANK in the Window Aggregate function.
 - Describe the functionality of RESET WHEN in the Window Aggregate function.
 - Describe the functionality of QUALIFY in the Window Aggregate function.
- Time/Date/Timestamp/Intervals (ANSI vs. Teradata) (Non-temporal)
 - Identify the correct use of Time/Date in expressions involving computations, conversions, literals, and extractions.
 - Identify the correct use of Timestamp in expressions involving computations, conversions, literals, and extractions.
 - Identify the correct use of Intervals in expressions involving computations, conversions, literals, date intervals, and extractions.
 - Given a date, identify valid date calculations in a Teradata database.
 - Describe the functionality of the EXPAND ON keyword.

- Aggregations
 - Identify the use of GROUP BY, HAVING, DISTINCT, and WHERE.
 - Identify the impact of NULLs on the aggregate functions.
 - Given a scenario, identify which extended GROUP BY operator (e.g., ROLLUP) to use.
 - Describe the characteristics of properly using GROUP BY, WHERE and HAVING.
- SQL Optimization Concepts
 - Identify characteristics of a query that indicates optimization opportunities.
 - Given a scenario, identify the result set returned by SAMPLE (e.g., replacement vs. no replacement).
 - Identify the processing differences between TOP N and SAMPLE.
- Temporal Concepts
 - Describe the use of temporal data types and qualifiers.
 - Describe the effect of INSERTS using Current, Sequenced or Non-sequenced qualifiers.
 - Describe the effect of UPDATES using Current, Sequenced or Non-sequenced qualifiers.
 - Describe the effect of DELETES using Current, Sequenced or Non-sequenced qualifiers.
 - Describe the effect of the AS OF qualifier.
 - Describe the characteristics and use of VALIDTIME and TRANSACTIONTIME.