CHAPTER 8: ADVANCED SQL

1. A relational join operation merges rows from two tables.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.341

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. An inequality condition is also known as a natural join and an equality condition is also called a theta join.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.341

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. Subqueries cannot be used in combinations with joins.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.352

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. The SELECT statement uses the attribute list to indicate what columns to project in the resulting set.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.356

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. Numeric functions take one numeric parameter and return one value.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.366

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. String manipulation functions are rarely used in programming.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.366

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. UNION, INTERSECT, and MINUS work properly only if relations are intersect-compatible, which means that thenames of the relation attributes and their data types must be different.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.371

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. A view is a virtual table based on a SELECT query.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.377

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Virtual Tables: Creating a View

1. A sequence is not associated with a table and can be dropped from a database with a DROP SEQUENCEcommand.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.386-387

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Sequences

1. SQL supports the conditional execution of procedures (IF-THEN-ELSE statements) that are typically supported bya programming language.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.387

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. To remedy the lack of procedural functionality in SQL, and to provide some standardization within the many vendorofferings, the SQL-99 standard defined the use of persistent stored modules.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.388

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. A persistent stored module is stored and executed on the database client machine.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.388

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Every PL/SQL block must be given a name.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Moderate REF: p.390

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Procedural SQL

1. In Oracle, you can use the SQL\*Plus command SHOW ERRORS to help you diagnose errors found in PL/SQLblocks.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.390

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. PL/SQL blocks have a section used to declare variables.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.391

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. The most useful feature of PL/SQL blocks is that they let a designer create code that can be named, stored, andexecuted by the DBMS.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.391

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Automating business procedures and automatically maintaining data integrity and consistency are trivial in a modernbusiness environment.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.392

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. A trigger is procedural SQL code that is automatically invoked by the RDBMS upon the occurrence of a given datamanipulation event.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.393

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Triggers can only be used to update table values.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.393

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. A statement-level trigger is assumed if a designer omits the FOR EACH ROW keywords.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.394

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. A row-level trigger is assumed if we omit the FOR EACH ROW keywords and a statement-level trigger requiredthe use of the FOR EACH ROW keyword.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.394

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. MySQL allows multiple triggering conditions per trigger.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.394

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. BEFORE means before the changes are made in memory but after the changes are permanently saved to disk.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.398

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Just like database triggers, stored procedures are stored in the database.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.401

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. One of the major advantages of stored procedures is that they can be used to encapsulate and represent businesstransactions.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.401

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Stored procedures must have at least one argument.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.402

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Variables can be declared inside a stored procedure.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Moderate REF: p.402

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Procedural SQL

1. Cursors are held in a reserved memory area in the client computer.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.407

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. An implicit cursor is automatically created in procedural SQL when the SQL statement returns only one value.
   1. True
   2. False

*ANSWER:* True

PTS: 1 DIF: Difficulty: Easy REF: p.407

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. An explicit cursor must return two or more rows.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.407

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. A stored function is another name for a stored procedure.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.409

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. “Linked SQL” is a term used to refer to SQL statements that are contained within an application programminglanguage such as COBOL, C++, ASP, Java, or ColdFusion.
   1. True
   2. False

*ANSWER:* False

PTS: 1 DIF: Difficulty: Easy REF: p.410

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Embedded SQL

1. The following SQL statement uses a(n) .

SELECT P\_CODE, P\_DESCRIPT, P\_PRICE, V\_NAMEFROM PRODUCT, VENDOR

WHERE PRODUCT.V\_CODE = VENDOR.V\_CODE;

* 1. set operator b. natural join

c. “old­style” join d. procedural statement

*ANSWER:* c

PTS: 1 DIF: Difficulty: Moderate REF: p.341

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: SQL Join Operators

1. When using a(n) join, only rows that meet the given criteria are returned.
   1. full b. inner

c. outer d. set

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.341

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. The statement SELECT \* FROM T1, T2 produces a(n) join.
   1. cross b. natural

c. equi- d. full

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.342

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. How many rows would be returned from a cross join of tables A and B, if A contains 8 rows and B contains 18?

a. 8 b. 18

c. 26 d. 144

*ANSWER:* d

PTS: 1 DIF: Difficulty: Easy REF: p.342

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. A(n) join will select only the rows with matching values in the common attribute(s).
   1. natural b. cross

c. full d. outer

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.343

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. If a designer wishes to create an inner join, but the two tables do not have a commonly named attribute, he can usea(n) \_\_\_\_\_ clause.
   1. OF b. USING

c. HAS d. JOIN ON

*ANSWER:* d

PTS: 1 DIF: Difficulty: Easy REF: p.345

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. A(n) join returns not only the rows matching the join condition (that is, rows with matching values in thecommon columns) but also the rows with unmatched values.
   1. outer b. inner

c. equi- d. cross

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.347

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. The syntax for a left outer join is .
   1. SELECT column-list

FROM table1 OUTER JOIN table2 LEFT

WHERE join-condition

* 1. SELECT column-list

FROM table1 LEFT [OUTER] JOIN table2

ON join-condition

c. SELECT column-list

WHERE LEFT table1 = table 2

d. SELECT column-list

FROM table1 LEFT table2 [JOIN]

WHERE join-condition

*ANSWER:* b

PTS: 1 DIF: Difficulty: Moderate REF: p.347

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: SQL Join Operators

1. In subquery terminology, the first query in the SQL statement is known as the query.
   1. outer b. left

c. inner d. base

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.350

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. In the context of SELECT subquery types, a is returned when an UPDATE subquery is used.
   1. NULL b. single value

c. list of values d. virtual table

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.351

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. Which of the following is a feature of a correlated subquery?
   1. The inner subquery executes first. b. The outer subquery initiates the process ofexecution in a subquery.
2. The inner subquery initiates the process of d. The outer subquery executes independent

executionin a subquery. of the inner subquery.

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.359

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. The function returns the current system date in MS Access.
   1. TO\_DATE() b. SYSDATE()

c. DATE() d. TODAY()

*ANSWER:* c

PTS: 1 DIF: Difficulty: Easy REF: p.362

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. When using the Oracle TO\_DATE function, the code represents a three-letter month name.
   1. MON b. MM3

c. MONTH d. MM

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.363

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. In Oracle, the function converts a date to a character string.
   1. CONVERT() b. TO\_DATE

c. TO\_CHAR() d. TO\_STRING()

*ANSWER:* c

PTS: 1 DIF: Difficulty: Easy REF: p.363

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. is a string function that returns the number of characters in a string value.
   1. LENGTH b. SUBSTRING

c. CONCAT d. UCASE

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.368

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. When using the Oracle TO\_NUMBER function to convert a character string into a number, represents adigit.
   1. 0 b. 9

c. $ d. #

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.369

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. The Oracle function compares an attribute or expression with a series of values and returns an associatedvalue or a default value if no match is found.
   1. NVL b. TO\_CHAR

c. DECODE d. CONVERT

*ANSWER:* c

PTS: 1 DIF: Difficulty: Easy REF: p.370

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. is a relational set operator.
   1. MINUS b. PLUS

c. ALL d. EXISTS

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.371

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. “Union­compatible” means that the .
   1. names of the relation attributes can be different, but the data types must be alike
   2. names of the relation attributes must be the same, but the data types can be different
   3. names of the relation attributes must be the same and their data types must be alike
   4. number of attributes must be the same, but the names and data types can be different

*ANSWER:* c

PTS: 1 DIF: Difficulty: Moderate REF: p.371

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Relational Set Operators

1. The data type is considered compatible with VARCHAR(35).
   1. DATE b. INT

c. TINYINT d. CHAR(15)

*ANSWER:* d

PTS: 1 DIF: Difficulty: Easy REF: p.371

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. The statement combines rows from two queries and excludes duplicates.
   1. UNION b. UNION ALL

c. INTERSECT d. MINUS

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.372

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. Assume a designer is using the UNION operator to combine the results from two tables with identical structure,CUSTOMER and CUSTOMER\_2. The CUSTOMER table contains 10 rows, while the CUSTOMER\_2 tablecontains 7 rows. Customers Jenna and Howard are included in the CUSTOMER table as well as in theCUSTOMER\_2 table. How many records are returned when using the UNION operator?

a. 7 b. 10

c. 15 d. 17

*ANSWER:* c

PTS: 1 DIF: Difficulty: Moderate REF: p.372

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Relational Set Operators

1. Assume you are using the UNION ALL operator to combine the results from two tables with identical structure,CUSTOMER and CUSTOMER\_2. The CUSTOMER table contains 10 rows, while the CUSTOMER\_2 tablecontains 7 rows. Customers Dunne and Olowski are included in the CUSTOMER table as well as in theCUSTOMER\_2 table. How many records are returned when using the UNION ALL operator?

a. 7 b. 10

c. 15 d. 17

*ANSWER:* d

PTS: 1 DIF: Difficulty: Moderate REF: p.373

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Relational Set Operators

1. Assume you are using the INTERSECT operator to combine the results from two tables with identical structure,CUSTOMER and CUSTOMER\_2. The CUSTOMER table contains 10 rows, while the CUSTOMER\_2 tablecontains 7 rows. Customers Dunne and Olowski are included in the CUSTOMER table as well as in theCUSTOMER\_2 table. How many records are returned when using the INTERSECT operator?
   1. 0 b. 2

c. 7 d. 10

*ANSWER:* b

PTS: 1 DIF: Difficulty: Moderate REF: p.374

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Relational Set Operators

1. The statement in SQL combines rows from two queries and returns only the rows that appear in the first setbut not in the second.
   1. UNION b. UNION ALL

c. INTERSECT d. MINUS

*ANSWER:* d

PTS: 1 DIF: Difficulty: Easy REF: p.375

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. Assume you are using the MINUS operator to combine the results from two tables with identical structure,CUSTOMER and CUSTOMER\_2. The CUSTOMER table contains 10 rows, while the CUSTOMER\_2 tablecontains 7 rows. Customers Dunne and Olowski are included in the CUSTOMER table as well as in theCUSTOMER\_2 table. How many records are returned when using the MINUS operator?
   1. 0 b. 2

c. 8 d. 10

*ANSWER:* c

PTS: 1 DIF: Difficulty: Moderate REF: p.375-376

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Relational Set Operators

1. The operator could be used in place of INTERSECT if the DBMS does not support it.
   1. IN b. OF

c. AND d. UNION

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.377

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. The operator could be used in place of MINUS if the DBMS does not support it.
   1. IN b. NOT IN

c. AND d. UNION

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.377

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. The Oracle equivalent to an MS Access AutoNumber is a(n) .
   1. auto-number b. sequence

c. TO\_NUMBER function d. trigger

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.382

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Sequences

1. Which of the following is a feature of oracle sequences?
   1. Oracle sequences are tied to columns and tables. b. Oracle sequences generate a character string

that can be assigned to tables.

1. An oracle sequence uses the identity column d. An oracle sequence can be created and deleted

propertyto automatically number rows. anytime.

*ANSWER:* d

PTS: 1 DIF: Difficulty: Easy REF: p.383

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Sequences

1. The pseudo-column is used to select the next value from a sequence.
   1. CURRVAL b. NEXTVAL

c. NEXT d. GET\_NEXT

*ANSWER:* b

PTS: 1 DIF: Difficulty: Easy REF: p.384

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Sequences

1. In Oracle, make(s) it possible to merge SQL and traditional programming constructs, such as variables,conditional processing (IF-THEN-ELSE), basic loops (FOR and WHILE loops,) and error trapping.
   1. cursor-style processing b. stored procedures

c. embedded SQL d. Procedural Language SQL

*ANSWER:* d

PTS: 1 DIF: Difficulty: Easy REF: p.388

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. The Oracle string concatenation function is .
   1. CONCAT b. +

c. || d. &&

*ANSWER:* c

PTS: 1 DIF: Difficulty: Easy REF: p.391

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. The PL/SQL block starts with the section.
   1. IS b. OPEN

c. DECLARE d. BEGIN

*ANSWER:* c

PTS: 1 DIF: Difficulty: Easy REF: p.391

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. Oracle recommends for creating audit logs.
   1. triggers b. stored procedures

c. stored functions d. tables

*ANSWER:* a

PTS: 1 DIF: Difficulty: Easy REF: p.393

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. is a cursor attribute that returns TRUE if the last FETCH returned a row, and FALSE if not.
   1. %ROWCOUNT b. %NOTFOUND

c. %FOUND d. %ISOPEN

*ANSWER:* c

PTS: 1 DIF: Difficulty: Easy REF: p.408

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. The determines the common attribute or attributes by looking for identically named attributes and compatibledata types.

*ANSWER:* natural join

PTS: 1 DIF: Difficulty: Easy REF: p.343

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. An alternate syntax for a join is: SELECT column-list FROM table1 JOIN table2 (common-column).

*ANSWER:* USING

PTS: 1 DIF: Difficulty: Easy REF: p.344

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Join Operators

1. When using a subquery, the output of a(n) query is used as the input for the outer query.

*ANSWER:* inner

PTS: 1 DIF: Difficulty: Easy REF: p.350

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. The clause is used to restrict the output of a GROUP BY query by applying a conditional criteria to thegrouped rows.

*ANSWER:* HAVING

PTS: 1 DIF: Difficulty: Easy REF: p.353

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. The IN subquery uses a(n) operator.

*ANSWER:* equality

PTS: 1 DIF: Difficulty: Easy REF: p.354

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. The use of the operator allows you to compare a single value with a list of values returned by the firstsubquery (sqA) using a comparison operator other than EQUALS.

*ANSWER:* ALL

PTS: 1 DIF: Difficulty: Easy REF: p.355

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. The statement uses the attribute list to indicate what columns to project in the resulting set.

*ANSWER:* SELECT

PTS: 1 DIF: Difficulty: Easy REF: p.356

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. A(n) subquery is a subquery that executes once for each row in the outer query.

*ANSWER:* correlated

PTS: 1 DIF: Difficulty: Easy REF: p.358

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Subqueries and Correlated Queries

1. Oracle uses the function to extract the various parts of a date.

*ANSWER:* TO\_CHAR

PTS: 1 DIF: Difficulty: Easy REF: p.363

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. functions extract a value of a given data type and convert it to the equivalent value in another data type.

*ANSWER:* Conversion

PTS: 1 DIF: Difficulty: Easy REF: p.368

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. The syntax of the DECODE function starts with .

*ANSWER:* DECODE(e, x, y, d)

PTS: 1 DIF: Difficulty: Easy REF: p.370

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: SQL Functions

1. The statement combines the output of two SELECT queries.

*ANSWER:* UNION

PTS: 1 DIF: Difficulty: Easy REF: p.372

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. A(n) query can be used to produce a relation that retains the duplicate rows.

*ANSWER:* UNION ALL

PTS: 1 DIF: Difficulty: Easy REF: p.373

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. The statement can be used to combine rows from two queries, returning only the rows that appear in bothsets.

*ANSWER:* INTERSECT

PTS: 1 DIF: Difficulty: Easy REF: p.373

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. The syntax of the MINUS statement in Oracle is .

*ANSWER:* query MINUS query

PTS: 1 DIF: Difficulty: Easy REF: p.375

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. If the DBMS does not support the INTERSECT statement, one can use a(n) subquery to achieve the sameresult.

*ANSWER:* IN

PTS: 1 DIF: Difficulty: Easy REF: p.377

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. A(n) view is a view that can be used to update attributes in the base table(s) that are used in the view.

*ANSWER:* updatable

PTS: 1 DIF: Difficulty: Easy REF: p.380

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. A(n) routine pools multiple transactions into a single batch to update a master table field in a singleoperation.

*ANSWER:* batch update

PTS: 1 DIF: Difficulty: Easy REF: p.379

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Relational Set Operators

1. In MS Access, a designer can use the data type to define a column in his table that will be automaticallypopulated with unique numeric values.

*ANSWER:* AutoNumber

PTS: 1 DIF: Difficulty: Easy REF: p.382

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Sequences

1. In an Oracle sequence, the pseudo-column retrieves the current value of a sequence.

*ANSWER:* CURRVAL

PTS: 1 DIF: Difficulty: Easy REF: p.384

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Sequences

1. Using Oracle , a designer can write a PL/SQL code block by enclosing the commands inside BEGIN andEND clauses.

*ANSWER:* SQL\*Plus

PTS: 1 DIF: Difficulty: Easy REF: p.389

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. A row-level trigger requires use of the keywords and is executed once for each row affected by thetriggering statement.

*ANSWER:* FOR EACH ROW

PTS: 1 DIF: Difficulty: Easy REF: p.394

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Procedural SQL

1. is the term used to describe an environment in which the SQL statement is not known in advance and isgenerated at run time.

*ANSWER:* Dynamic SQL

PTS: 1 DIF: Difficulty: Easy REF: p.414

NAT: BUSPROG: Technology STATE: DISC: Information Technology

KEY: Bloom’s: Knowledge TOP: Embedded SQL

1. Explain the different basic types of join operations. What are they and how do they work?

*ANSWER:* Join operations can be classified as inner joins and outer joins. The inner join is the traditional join inwhich only rows that meet a given criterion are selected. The join criterion can be an equality condition(also called a natural join or an equijoin) or an inequality condition (also called a theta join.) An outerjoin returns not only the matching rows but the rows with unmatched attribute values for one table orboth tables to be joined. The SQL standard also introduces a special type of join, called a cross join, thatreturns the same result as the Cartesian product of two sets or tables.

PTS: 1 DIF: Difficulty: Moderate REF: p.341

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: SQL Join Operators

1. What are the four different types of results that can be returned from a subquery?

*ANSWER:* A subquery can return one or more values.

One single value (one column and one row):

This subquery is used anywhere a single value is expected, as in the right side of a comparisonexpression. An example is the preceding UPDATE subquery, in which an average price is assigned tothe product’s price. When a value is assigned to an attribute, a single value is assigned and not a list ofthem. Therefore, the subquery must return only one value (one column, one row). If the query returnsmultiple values, the DBMS generates an error.

A list of values (one column and multiple rows):

This type of subquery is used anywhere a list of values is expected, such as when using the IN clause—for example, when comparing the vendor code to a list of vendors. Again, in this case, there is onlyone column of data with multiple value instances. This type of subquery is used frequently incombination with the IN operator in a WHERE conditional expression.

A virtual table (multicolumn, multirow set of values):

This type of subquery can be used anywhere a table is expected, such as when using the FROMclause.

The fourth result that a subquery can return is no value at all. It is called NULL.

PTS: 1 DIF: Difficulty: Moderate REF: p.351

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Subqueries and Correlated Queries

1. Describe the important features and applications of SQL functions

*ANSWER:* SQL functions are very useful tools. Functions always use a numerical, date, or string value. The valuemay be part of the command itself (a constant or literal) or it may be an attribute located in a table.Therefore, a function may appear anywhere in a SQL statement where a value or an attribute can beused. There are many types of SQL functions, such as arithmetic, trigonometric, string, date, and timefunctions.

These functions are useful when all employees need to be ordered by year of birth, or when amarketing department wants to generate a list of all customers ordered by zip code and the first threedigits of their telephone numbers. In both of these cases, data elements that are not present as such inthe database will be required; instead, an SQL function that can be derived from an existing attribute isrequired.

PTS: 1 DIF: Difficulty: Moderate REF: p.361

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: SQL Functions

1. Describe the characteristics of an Oracle sequence.

*ANSWER:* - Oracle sequences are an independent object in the database, where sequences are not a data type.

* Oracle sequences have a name and can be used anywhere a value is expected.
* Oracle sequences are not tied to a table or a column.
* Oracle sequences generate a numeric value that can be assigned to any column in any table.
* The table attribute, to which a value based on a sequence is assigned, can be edited and modified.
* An Oracle sequence can be created and deleted anytime.

PTS: 1 DIF: Difficulty: Moderate REF: p.383

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Sequences

1. How are triggers critical to proper database operation and management?

*ANSWER:* - Triggers can be used to enforce constraints that cannot be enforced at the DBMS design andimplementation levels.

* Triggers add functionality by automating critical actions and providing appropriate warnings andsuggestions for remedial action. In fact, one of the most common uses for triggers is to facilitate theenforcement of referential integrity.
* Triggers can be used to update table values, insert records in tables, and call other stored procedures.

PTS: 1 DIF: Difficulty: Moderate REF: p.393

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Procedural SQL

1. Summarize the hierarchy of steps involved in creating and running an executable program with embedded SQLstatements.

*ANSWER:* While the steps required to create and execute a program consisting of embedded SQL statements varyfrom one programming language to another, the following steps are considered as a general standard.

1. The programmer writes embedded SQL code within the host language instructions. The code followsthe standard syntax required for host language and embedded SQL.
2. A preprocessor is used to transform the embedded SQL into specialized procedure calls that areDBMS-specific and language-specific. The preprocessor is provided by the DBMS vendor and isspecific to the host language.
3. The program is compiled using the host language compiler. The compiler creates an object codemodule for the program containing the DBMS procedure calls.
4. The object code is linked to the respective library modules and generates the executable program.This process binds the DBMS procedure calls to the DBMS run-time libraries. Additionally, the bindingprocess typically creates an “access plan” module that contains instructions to run the embedded codeat run time.
5. The executable is run, and the embedded SQL statement retrieves data from the database.

PTS: 1 DIF: Difficulty: Moderate REF: p.411

NAT: BUSPROG: Analytic STATE: DISC: Information Technology

KEY: Bloom’s: Comprehension TOP: Embedded SQL