

Review Test Submission: Midt

| | |
|-------------------|---|
| User | Ruojia Zhang |
| Course | 202203_Database Management Systems_CSCI_6441_10 |
| Test | Midt |
| Started | 11/3/22 10:48 PM |
| Submitted | 11/4/22 12:11 AM |
| Due Date | 11/10/22 11:59 PM |
| Status | Completed |
| Attempt Score | 15.5 out of 20 points |
| Time Elapsed | 1 hour, 22 minutes |
| Results Displayed | All Answers, Submitted Answers, Correct Answers, Feedback, Incorrectly Answered Questions |

Question 1

0.5 out of 0.5 points



Consider the following query executed for an employees' table:

```
SELECT * FROM Employees  
WHERE Salary IN (SELECT MAX(Salary) FROM Employees  
WHERE JobProfile!='Manager' GROUP BY DeptID);
```

What is the output of the given query?

Selected



D.

Answer:

Details of the employees having the highest salary in each department are displayed.

Answers:

Details of all the employees are displayed.

A.

Details of all the employees are displayed department-wise.

B.

C.

Details of the employee having the highest salary across all departments are displayed.



D.

Details of the employees having the highest salary in each department are displayed.

Response D - The given query displays the details of the employees having the highest salary in each department. The subquery returns the maximum salary in each department for only those employees who are not managers. Then IN operator then checks if a row with the maximum salary is in the result set of the subquery. The query then displays all those rows with the maximum salary.

It is incorrect that the given query displays the details of all the employees. The details of all the employees will be displayed by the following query:

```
SELECT * FROM Employees;
```

It is incorrect that the query displays details of all the employees department-wise. Details of the employees for each department will be displayed by the following query:

```
SELECT * FROM Employees GROUP BY DeptID;
```

It is incorrect that the query displays details of the employee having the highest salary across all departments. This result can be achieved by the following query:

```
SELECT * FROM Employees WHERE Salary=MAX(Salary);
```

Question 2

0.5 out of 0.5 points



Which statement is CORRECT?

Selected Answer: ☒ Qualified associations can be used to represent weak entity types.

Answers:

☐ An association is an instance of a link.

☐ Only binary associations are supported in the UML class diagram.

☐ An association is always bidirectional.

☒ Qualified associations can be used to represent weak entity types.

Question 3

0.5 out of 0.5 points



Connectivities and cardinalities are established by concise statements known as business rules.

Selected Answer: ☒ True

Answers:

☒ True

☐ False

Question 4

0.5 out of 0.5 points



Code example 6-2

```
WITH invoice_averages AS
    (SELECT vendor_id, AVG(invoice_total) AS average_invoice
     FROM invoices
     GROUP BY vendor_id
     HAVING AVG(invoice_total) > 100
     ORDER BY average_invoice DESC)
SELECT i.vendor_id, MAX(i.invoice_total) AS largest_invoice
FROM invoices i JOIN invoice_averages ia
    ON i.vendor_id = ia.vendor_id
GROUP BY i.vendor_id
ORDER BY largest_invoice DESC
```

(Please refer to code example 6-2.) When this query is executed, there will be one row

Selected ☒ d. for each vendor with an average invoice total that's greater than 100
Answer:

Answers: a.
for each vendor with a maximum invoice total that's greater than 100

b. for each vendor

c.
for each invoice with an invoice total that's greater than the average invoice total for the vendor and also greater than 100

☒ d. for each vendor with an average invoice total that's greater than 100

Question 5

0 out of 0.5 points



Relational views are used for all the following reasons *except*:

Selected Answer: ☒ A. they can contain calculated data.

Answers: A. they can contain calculated data.
B. they can hide portions of the database from users.

☒ C. they provide more efficient access to records.

D. they allow users customized access to data.

Response Feedback: **Ahead:** Views
Complexity: Moderate
Subject: Chapter 4
Title: The Relational Model

Question 6

0.5 out of 0.5 points



A(n) _____ is the attribute in the supertype entity that determines to which entity subtype each supertype occurrence is related.

Selected Answer: ☒ c. subtype discriminator

- Answers:
- a. inheritance discriminator
 - b. specialization hierarchy
 - ☒ c. subtype discriminator
 - d. entity supertype

Question 7

0.5 out of 0.5 points



Which of the statements below best describes the result set returned by this SELECT statement?

```
SELECT vendor_id,
       SUM(invoice_total - payment_total - credit_total) AS column-2
FROM invoices
WHERE invoice_total - payment_total - credit_total > 0
GROUP BY vendor_id
```

Selected Answer: ☒ b. The total unpaid balance due for each vendor_id

- Answers:
- a. The unpaid balance for each invoice
 - ☒ b. The total unpaid balance due for each vendor_id
 - c. The total amount invoiced by each vendor_id
 - d. The total of paid invoices for each vendor_id

Question 8

0 out of 0.5 points



Due to a change to a particular table, you are concerned with the number of stored procedures and functions that

may have been affected.

Which view can you query to check the status of each subprogram and determine which procedures and

functions must be recompiled?

Selected Answer:

USER_SOURCE

☒ b.

Answers:

USER_STATUS

a.

USER_SOURCE

b.

USER_OBJECTS

☒ c.

USER_CONSTRUCTS

d.

Response

Feedback:

You can query USER_OBJECTS to check the status of each subprogram and determine which procedures and

functions must be recompiled. The USER_OBJECTS view contains a column called STATUS . This column has two

possible values: VALID or INVALID . Invalid constructs will be compiled automatically upon the next execution. A

developer can also explicitly compile constructs using the ALTER statement. For example, this statement will

compile the procedure named check_sal :

```
ALTER PROCEDURE check_sal COMPILE;
```

You can query the USER_SOURCE view to capture the source code for a PL/SQL object. The USER_SOURCE view

contains a column called TEXT . This column contains the source code of the particular procedure, function, or

package. The source code of database triggers is not included in this view. Instead, it can be obtained by

querying the USER_TRIGGERS view.

USER_STATUS and USER_CONSTRUCTS are incorrect because these are not valid data dictionary views.

Question 9

0.5 out of 0.5 points



In the relational model, referential integrity is a constraint that places restrictions on the values of:

Selected Answer: ☒ A. foreign keys.

Answers: ☒ A. foreign keys.

☐ B. references.

C. superkeys.

D. secondary keys.

Response Feedback: **Ahead:** Integrity Constraints
Complexity: Easy
Subject: Chapter 4
Title: The Relational Model

Question 10

0.5 out of 0.5 points



A(n) _____ is the set of possible values for a given attribute.

Selected Answer: ☒ b. domain

Answers:

- ☐ a. identifier
- ☒ b. domain
- ☐ c. key
- ☐ d. range

Question 11

0.5 out of 0.5 points



In converting from an ER diagram to a relational model, tables are used to represent:

Selected Answer: ☒ B. both entities and relationships.

Answers:

- ☐ A. only entities and attributes.
- ☒ B. both entities and relationships.
- ☐ C. relationships only.
- ☐ D. entities only.

Response Feedback: **Ahead:** Mapping an Entity-Relationship (ER) Model to a Relational Schema
Complexity: Moderate
Subject: Chapter 4
Title: The Relational Model

Question 12

0.5 out of 0.5 points



Evaluate this CREATE TABLE statement:

```
1. CREATE TABLE supplier (  
2. supplier_id NUMBER,  
3. supplier_name VARCHAR2(25),  
4. address VARCHAR2(25),  
5. city VARCHAR2(25),  
6. region VARCHAR2(25),  
7. postal_code VARCHAR2(11),  
8. CONSTRAINT supplier_id_pk PRIMARY KEY(supplier_id),
```

9. CONSTRAINT supplier_name_nn NOT NULL(supplier_name),
10. CONSTRAINT postal_code_fk FOREIGN KEY (postal_code) REFERENCES postal_code (code));

Which line will cause an error?

Selected Answer: 9

☒ E.

Answers: 1

A.

2

B.

7

C.

8

D.

9

☒ E.

10

F.

Response E - Line 9, CONSTRAINT supplier_name_nn NOT NULL, causes an error because NOT NULL constraints cannot be defined at the table level. This CREATE TABLE statement returns an ORA-00904: invalid column name error because the Oracle Server does not recognize the NOT NULL constraint in a table-level constraint definition. To create the SUPPLIER table, use this statement:

```
CREATE TABLE supplier (  
  supplier_id NUMBER,  
  supplier_name VARCHAR2(25) NOT NULL,  
  address VARCHAR2(25),  
  city VARCHAR2(25),  
  region VARCHAR2(25),  
  postal_code VARCHAR2(11),  
  CONSTRAINT supplier_id_pk PRIMARY KEY(supplier_id),  
  CONSTRAINT postal_code_fk FOREIGN KEY (postal_code) REFERENCES postal_code (code));
```

This statement defines the NOT NULL constraint on the SUPPLIER_NAME column as a column-level constraint.

The remaining options are incorrect because none of these lines contain syntax errors.

Question 13

0.5 out of 0.5 points



Which of the following is an advantage of a database compared to a file processing system?

Selected Answer: ☒ C. Sharing of data

Answers: A. Lower cost

B. Fast processing of sequential data

☒ C. Sharing of data

D. Simpler recovery

Response Feedback: **Ahead:** Advantages of the Integrated Database Approach
Complexity: Moderate
Subject: Chapter 1
Title: Introductory Database Concepts

Question 14

0.5 out of 0.5 points



The programming model for batch-oriented, parallel computation on Hadoop is called:

Selected Answer: ☒ D. MapReduce.

Answers:

A. YARN.

B. HDFS.

C. Spark.

☒ D. MapReduce.

Response Feedback: **Ahead:** Big Data
Complexity: Easy
Subject: Chapter 1
Title: Introductory Database Concepts

Question 15

0 out of 0.5 points



The ITEM table contains these columns:

ITEM_ID NUMBER(9)

COST NUMBER(7,2)

RETAIL NUMBER(7,2)

The RETAIL and COST columns contain values greater than zero for all rows. Evaluate these two SQL statements:

Statement 1 `SELECT item_id, (retail * 1.25) + 5.00 - (cost * 1.10) - (cost * .10) AS Calculated Profit FROM item;`

Statement 2 `SELECT item_id, retail * 1.25 + 5.00 - cost * 1.10 - cost * .10 "Calculated Profit" FROM item;`

What will be the result?

Selected Answer: ☒ B. Statement 1 and Statement 2 will return the same value.

Answers:

A. Statement 1 will return a higher value than Statement 2.

B. Statement 1 and Statement 2 will return the same value.

C. Statement 1 will display the Calculated Profit column heading.

☒ D. One of the statements will not execute.

Response D - One of the statements will not execute. Of the two SELECT statements, only

Feedback: Statement 2 executes. Statement 1 fails because the alias is improperly defined. An alias containing spaces must be enclosed in double-quotes ("") or the entire statement fails. The AS keyword is not required when creating a column alias, but including the AS keyword may make the SELECT statement easier to read.

All of the other options are incorrect because Statement 1 fails. Because multiplication and division operators take precedence over the addition and subtraction operators, the expressions $\text{retail} * 1.25$, $\text{cost} * 1.10$, and $\text{cost} * .10$ will be evaluated first. Precedence evaluation is performed from left to right when two operators of the same precedence level exist in the same expression. In Statement 1, the $\text{retail} * 1.25$, $\text{cost} * 1.10$, and $\text{cost} * .10$ expressions are surrounded by parentheses forcing them to be evaluated first. In Statement 2, the $\text{retail} * 1.25$, $\text{cost} * 1.25$, and $\text{cost} * .10$ expressions contain the first operator of the higher precedence level causing them to be evaluated first. In this scenario, the parentheses have no effect on the order that the expressions are evaluated. Disregarding the alias at the end of Statement 1's SELECT clause, the results of the two statements are the same.

Question 16

0.5 out of 0.5 points



The database contents are loaded during the _____ phase of the Systems Development Life Cycle (SDLC).

Selected Answer: ☒ d. implementation

- Answers:
- a. analysis
 - b. detailed systems design
 - c. maintenance
 - ☒ d. implementation

Question 17

0.5 out of 0.5 points



True or False? If an attribute is shown with a double oval on an ER diagram, every entity instance must have more than one value for that attribute.

Selected Answer: ☒ False

- Answers:
- True
 - ☒ False

Response Feedback: **Ahead:** Attributes
Complexity: Easy
Subject: Chapter 3
Title: The Entity-Relationship Model

Question 18

0.5 out of 0.5 points



To delete all the records from a table EMPLOYEE and destroy the structure of the table, use which of the following commands?

Selected Answer: ☒ C. DROP EMPLOYEE;

- Answers:
- ☐ A. ERASE ALL FROM EMPLOYEE;
 - ☐ B. DELETE FROM EMPLOYEE;
 - ☒ C. DROP EMPLOYEE;
 - ☐ D. DELETE * FROM EMPLOYEE;

Response
Feedback:

Ahead: Manipulating the Database: SQL Data Manipulation Language (DML)

Complexity: Moderate

Subject: Chapter 5

Title: Relational Database Management Systems and SQL

Question 19

0.5 out of 0.5 points



True or False? All user views are updatable.

Selected Answer: ☒ False

- Answers:
- ☐ True
 - ☒ False

Response Feedback:

Ahead: Views

Complexity: Moderate

Subject: Chapter 4

Title: The Relational Model

Question 20

0 out of 0.5 points



Examine this code:

```
BEGIN  
  
theater_pck.v_total_seats_sold_overall;  
  
theater_pck.get_total_for_year;  
  
END;
```

For this code to be successful, what must be true?

Selected Answer: ☒ a.

Only the `get_total_for_year` variable must exist in the specification of the `theater_pck` package.

Answers: a.

Only the `get_total_for_year` variable must exist in the specification of the `theater_pck` package.

b.

Only the `v_total_seats_sold_overall` variable must exist in the specification of the `theater_pck` package.

c.

Both the `v_total_seats_sold_overall` variable and the `GET_TOTAL_FOR_YEAR` function must exist only in the body of the `theater_pck` package.

✓ d.

Both the `v_total_seats_sold_overall` variable and the `GET_TOTAL_FOR_YEAR` procedure must exist in the specification of the `theater_pck` package.

Response

Feedback: Both the `v_total_seats_sold_overall` variable and the `get_total_for_year` procedure must exist in the specification of the `theater_pck` package. Only constructs declared in the package specification are public and can be referenced from outside the package by prefixing them with the package name.

All of the other options are incorrect because they will not allow you to execute this code successfully.

Question 21

0.5 out of 0.5 points



Which of the following refers to the situation where different versions of the same data are stored at different places because they weren't updated consistently?

Selected Answer: ✓ a. Data redundancy

Answers: ✓ a. Data redundancy
b. Data dictionary
c. Data integrity

d. Data query

Question 22

0 out of 0.5 points



A relational view cannot be updated if:

Selected Answer: D. it is constructed from a join of base tables.

Answers:



A. it is missing the primary key of the underlying base table(s).

B. it is missing any attributes of the underlying base table(s).

C. it is a view of a view.

D. it is constructed from a join of base tables.

Response
Feedback:**Ahead:** Manipulating the Database: SQL Data Manipulation
Language (DML)**Complexity:** Easy**Subject:** Chapter 5**Title:** Relational Database Management Systems and SQL

Question 23

0.5 out of 0.5 points



The “_____” characteristic of a primary key states that the primary key should not have embedded semantic meaning.

Selected Answer: b. nonintelligent

Answers:

a. unique values



b. nonintelligent

c. preferably single-attribute

d. security-compliant

Question 24

0.5 out of 0.5 points



Which function or procedure would you use to initialize a BFILE column for inserting data?

Selected Answer: BFILENAME



C.

Answers:

BFILE

A.

TO_BFILE

B.

BFILENAME



C.

DBMS_LOB.READ

D.

DBMS_LOB.FILEEXISTS

E.

Response C - You would use the BFILENAME function to initialize a BFILE column for inserting data. BFILE represents a binary file stored in the OS outside of the database and is an external LOB. The BFILE stores a file locator to the external file. BFILENAME is a built-in function that can be used to initialize a BFILE column to point to an external file. Use the BFILENAME function in an INSERT statement to associate a BFILE column value with an external OS file.

All of the other options are incorrect because they are either invalid or would not be used to initialize a BFILE.

Question 25

0 out of 0.5 points



Which three statements concerning explicit datatype conversions are TRUE? (Choose three.)

Selected
Answers:

A date value may be converted to a number value using the TO_NUMBER function.



A date value may be converted to a character string using the TO_CHAR function.



A number value may be converted to a character string using the TO_CHAR function.

Answers:

A number value may be converted to a date value using the TO_DATE function.

A date value may be converted to a number value using the TO_NUMBER function.

A character value may be converted to a date value using the TO_DATE function.



A date value may be converted to a character value using the TO_DATE function.

A date value may be converted to a character string using the TO_CHAR function.



A number value may be converted to a character string using the TO_CHAR function.

A number value may be converted to a character value using the TO_NUMBER function.

Question 26

0.5 out of 0.5 points



Which of the following diagrams best represents the relationship between a table of customers and a table of orders placed by customers?

Selected Answer:



a.

Answers:

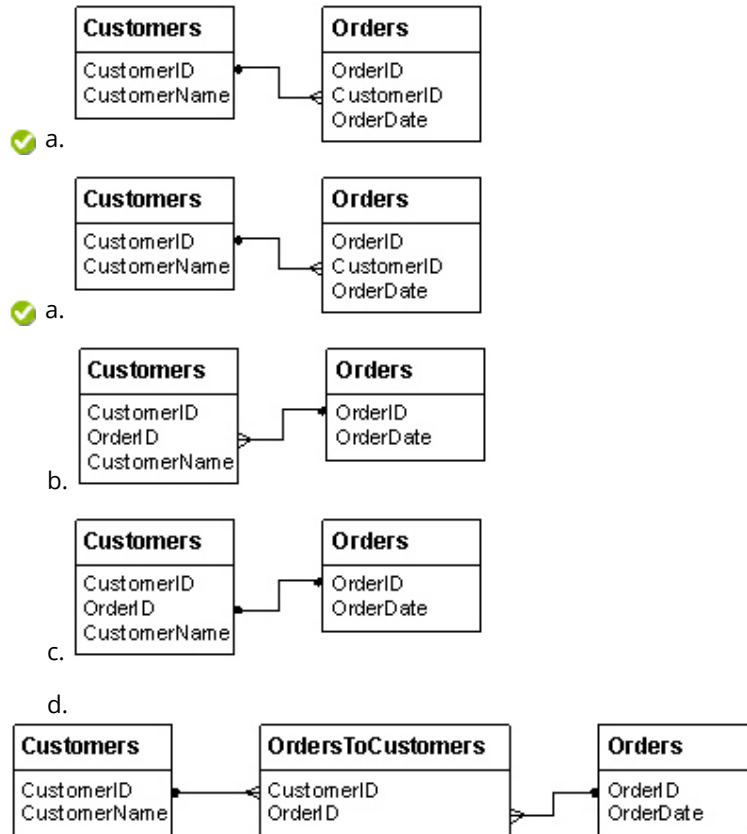


a.

b.

c.

d.



Question 27

0.5 out of 0.5 points



Which SELECT statement will display the next value of the PARTS_ID_SEQ sequence by actually retrieving the value from the sequence?

Selected Answer: SELECT parts_id_seq.NEXTVAL FROM SYS.DUAL;



Answers: SELECT NEXTVAL(parts_id_seq) FROM SYS.DUAL;

SELECT parts_id_seq.NEXTVAL FROM inventory;

SELECT parts_id_seq.NEXTVAL FROM SYS.DUAL;



SELECT NEXTVAL(parts_id_seq) FROM inventory;

SELECT parts_id_seq NEXTVAL FROM inventory;

Response Explanation: The f tement will display the next value of the
Feedback: SQL> SELECT parts_id_seq.NEXTVAL FROM SYS.DUAL;

Because a sequence is not tied directly to a table, sequence numbers are stored and generated independently of tables. To view the next value of the PARTS_ID_SEQ sequence, you can query the NEXTVAL pseudocolumn using the DUAL dummy table in the SYS schema. You must reference the PARTS_ID_SEQ sequence and the NEXTVAL pseudocolumn as parts_id_seq.NEXTVAL in the select list.

NEXTVAL is a pseudocolumn and not a function. Therefore, both SELECT statements that include the SELECT NEXTVAL (parts_id_seq) clause will return a syntax error.

While the SELECT statement that includes SELECT parts_id_seq.NEXTVAL and queries the INVENTORY table will successfully access the sequence, it will return a sequence number for each row in the INVENTORY table. In this scenario, you only wanted to return the next value of the sequence so this option is incorrect.

The SELECT statement that includes the SELECT parts_id_seq NEXTVAL clause is also incorrect because it contains invalid syntax for referencing the NEXTVAL pseudocolumn.

Question 28

0.5 out of 0.5 points



Which two subprogram headers are correct? (Choose two.)

Selected Answers:

```
CREATE OR REPLACE PROCEDURE get_sal  
(v_sal IN NUMBER)  
IS
```

☒ b.

```
CREATE OR REPLACE FUNCTION calc_comm  
(p_amnt IN NUMBER)  
RETURN NUMBER
```

☒ d.

Answers:

```
CREATE OR REPLACE PROCEDURE get_sal  
IS  
(v_sal IN NUMBER)
```

a.

```
CREATE OR REPLACE PROCEDURE get_sal  
(v_sal IN NUMBER)  
IS
```

☒ b.

```
CREATE OR REPLACE FUNCTION calc_comm  
RETURN NUMBER  
(p_amnt IN NUMBER)
```

c.

```
CREATE OR REPLACE FUNCTION calc_comm
(p_amnt IN NUMBER)
RETURN NUMBER
```

 d.

```
CREATE OR REPLACE FUNCTION calc_comm
(p_amnt IN NUMBER(3,2))
RETURN NUMBER
```

e.

Response

Feedback:

The two subprogram headers that are correct are:

```
CREATE OR REPLACE PROCEDURE get_sal
```

```
(v_sal IN NUMBER)
```

```
IS
```

and

```
CREATE OR REPLACE FUNCTION calc_comm
```

```
(p_amnt IN NUMBER)
```

```
RETURN NUMBER
```

When creating functions, the argument list must be defined prior to the RETURN clause and before the IS or AS

keywords. When creating procedures, the argument list must be defined prior to the IS or AS keywords. Both

procedures and functions define local variables after the IS or AS keywords.

The header that creates a procedure and includes the argument list after the IS keyword is incorrect. The

argument list is specified before the IS or AS keywords.

The header that creates a function and includes the RETURN clause before the argument list is incorrect. The

RETURN clause should be specified after the argument list and immediately before the IS or AS keywords.

The header that creates a function and includes a precision for the p_amnt argument in the argument list is

incorrect. You cannot specify precision in the argument list.

Question 29

0.5 out of 0.5 points

The technology that uses distributed peer-to-peer computing to securely manage



transactions using distributed ledgers is called:

Selected Answer: ☒ C. blockchain.

- Answers:
- ☐ A. object-oriented.
 - ☐ B. the Internet of Things.
 - ☒ C. blockchain.
 - ☐ D. cloud computing.

Response Feedback: **Ahead:** Uses of Databases
Complexity: Easy
Subject: Chapter 1
Title: Introductory Database Concepts

Question 30

0 out of 0.5 points



Examine this procedure:

```
CREATE OR REPLACE PROCEDURE calculate_budget
IS
v_budget studio.yearly_budget%TYPE;
BEGIN
v_budget := get_budget@proddb(11);
IF v_budget < 30000000 THEN
set_budget@proddb(11, 30000000);
END IF;
END;
```

The dependency mode is set to TIMESTAMP.

The local procedure, CALCULATE_BUDGET, was compiled yesterday at 8:00 a.m., after compiling the GET_BUDGET remote function. The GET_BUDGET remote function was recompiled at 4:00 p.m. today. What can be said about the subsequent executions of CALCULATE_BUDGET?

Selected ☒ C.

Answer: Unless the formal arguments of GET_BUDGET have changed, CALCULATE_BUDGET will execute without recompilation.

- Answers:
- ☐ A. All future execution attempts will result in a runtime error.
 - ☐ B. The first execution attempt will result in a recompilation and, if successful, will re-execute.
 - ☐ C. Unless the formal arguments of GET_BUDGET have changed, CALCULATE_BUDGET will execute without recompilation.
 - ☒ D.

The first execution attempt will result in a runtime error. The second execution attempt will result in a recompilation and, if successful, will re-execute.

Response D - The first execution attempt will result in a runtime error. The second
Feedback: execution attempt will result in a recompilation and, if successful, will re-execute. When compiling a local construct(CALCULATE_BUDGET) that invokes a remote construct (GET_BUDGET), the compilation timestamp of the remote construct (8:00 a.m.) is stored in the object code of the local construct. When executing the local construct, the compilation timestamp of the remote procedure recorded in its object code will be compared to the actual compilation timestamp. If the actual timestamp of the remote construct (4:00 p.m. after recompilation) is later than what is recorded in the local construct's object code, an error will result. This will mark the local construct invalid. Executing it a second time will result in a successful recompilation because the new timestamp of the remote construct will be recorded in the object code of the local construct.

All of the other options are incorrect because they do not reflect the correct result.

Question 31

0.5 out of 0.5 points



The record-based model that uses a tree structure is the:

Selected Answer: ☒ D. hierarchical model.

- Answers:
- ☐ A. network model.
 - ☐ B. object-oriented model.
 - ☐ C. relational model.
 - ☒ D. hierarchical model.

Response Feedback: **Ahead:** Overview of Data Models
Complexity: Easy
Subject: Chapter 2
Title: Database Planning and Database Architecture

Question 32

0 out of 0.5 points



Statement A: The impedance mismatch problem can be solved by using middleware to map data structures between the DBMS and the DDL statements.

Statement B: An object-oriented host language such as Java combined with a document-oriented DBMS such as MongoDB does not require mapping objects to documents and vice versa.

Which sentence(s) is/are correct?

Selected Answer: ☒ A and B

Answers: Only A

Only B

A and B

☒ Neither A or B

Question 33

0.5 out of 0.5 points



For which purpose are formal parameters used when creating functions?

Selected Answer:

passing values to the function

☒ b.

Answers:

restricting pragma references

a.

passing values to the function

☒ b.

bypassing directives to the compiler

c.

prompting the end user for information

d.

Response

Feedback:

Functions, like procedures, use formal parameters to transfer values to and from the calling environment. Unlike

procedures, OUT arguments are not typically used with functions. The very nature of a function returns exactly one

value. That's also why they can be embedded in SQL statements. Information is transferred from the function

back to the calling environment using the RETURN statement.

All of the other options are incorrect because they do not reflect the purpose of formal parameters in creating

functions.

Question 34

0.5 out of 0.5 points



A _____ entity has a primary key that is partially or totally derived from the parent entity in the relationship.

Selected Answer: ☒ b. weak

- Answers:
- ☐ a. business
 - ☒ b. weak
 - ☐ c. strong
 - ☐ d. child

Question 35

0.5 out of 0.5 points



True or False? One solution to mapping unions to relations is to create a surrogate key that will be the primary key of the union.

Selected Answer: ☒ True

- Answers:
- ☒ True
 - ☐ False

Response Feedback: **Ahead:** Mapping an Extended Entity-Relationship (EER) Model to a Relational Schema
Complexity: Difficult
Subject: Chapter 4
Title: The Relational Model

Question 36

0.5 out of 0.5 points



The INVENTORY table contains these columns:

ID_NUMBER NUMBER PK
CATEGORY VARCHAR2(10)
LOCATION NUMBER
DESCRIPTION VARCHAR2(30)
PRICE NUMBER(7,2)
QUANTITY NUMBER

You want to return the total of the extended amounts for each item category and location, including only those inventory items that have a price greater than \$100.00. The extended amount of each item equals the quantity multiplied by the price. Which SQL statement will return the desired result?

Selected Answer: ☐ SELECT category, SUM(price * quantity) TOTAL, location
FROM inventory
WHERE price > 100.00
☒ D. GROUP BY category, location;

Answers: ☐ SELECT category, SUM(price * quantity) TOTAL, location
FROM inventory
A. WHERE price > 100.00;

- SELECT category, location, SUM(price)
FROM inventory
WHERE price > 100.00
B. GROUP BY category, location;
- SELECT category, SUM(price * quantity) TOTAL, location
FROM inventory
WHERE price > 100.00
C. GROUP BY category;
- SELECT category, SUM(price * quantity) TOTAL, location
FROM inventory
WHERE price > 100.00
D. GROUP BY category, location;

Response D - To retrieve the desired result, you should use the following SELECT
Feedback: statement:

```
SELECT category, SUM(price * quantity) TOTAL, location  
FROM inventory  
WHERE price > 100.00  
GROUP BY category, location;
```

When you execute the query, records will be grouped by CATEGORY and then by LOCATION with the extended value being calculated for each group.

The SELECT statement that does not include a GROUP BY clause is incorrect because the records must first be grouped by CATEGORY and then by LOCATION. When aggregate functions are used, the calculations are performed for each group in the GROUP BY clause.

The SELECT statement that includes SUM(price) in the select list is incorrect. This statement would return a summed value of all prices for each group, and this is not what you desired.

The SELECT statement that only groups by CATEGORY is incorrect because when using group functions, all columns included in the SELECT list must either use an aggregate function or be included in the GROUP BY clause. In this scenario, both CATEGORY and LOCATION are included in the select list and do not use aggregate functions. Therefore, both of these columns must be included in the GROUP BY clause, or an error will result.

Question 37

0 out of 0.5 points



Examine this database trigger:

```
CREATE OR REPLACE TRIGGER prevent_gross_modification  
{additional trigger code}  
  
BEGIN  
  
IF TO_CHAR(sysdate,'DY') = 'MON' THEN  
  
RAISE_APPLICATION_ERROR(-20000, 'Gross receipts cannot be entered on Monday');  
  
END IF;
```

END;

This trigger must fire before each DELETE , INSERT , and UPDATE of the gross_receipt table. It should fire

only once for the entire data manipulation statement.

Which additional trigger code must you add?

Selected
Answer:

 d.

BEFORE DELETE OR INSERT OR UPDATE ON gross_receipt FOR EACH ROW

Answers:

BEFORE (gross_receipt) DELETE, INSERT, UPDATE

a.

AFTER DELETE OR INSERT OR UPDATE ON gross_receipt

b.

BEFORE DELETE OR INSERT OR UPDATE ON gross_receipt

 c.

d.

BEFORE DELETE OR INSERT OR UPDATE ON gross_receipt FOR EACH ROW

Response
Feedback:

You must add BEFORE DELETE OR INSERT OR UPDATE ON gross_receipt . Trigger timing is specified

using the BEFORE or AFTER keywords. This indicates when the trigger should fire in relation to the triggering

event. The triggering event is a data manipulation command.

You would not use BEFORE (gross_receipt) DELETE, INSERT, UPDATE because this is not the correct

syntax.

You would not use AFTER DELETE OR INSERT OR UPDATE ON gross_receipt . In this scenario you want

the trigger to fire before each DELETE , INSERT , or UPDATE . Using the AFTER keyword would cause the trigger to

fire after each DELETE , INSERT , or UPDATE statement is executed.

You would not use BEFORE DELETE OR INSERT OR UPDATE ON gross_receipt

FOR EACH ROW. You would use the FOR EACH ROW clause if you want the trigger to execute for each row

affected by the data manipulation command. In this scenario, the FOR EACH ROW clause is not used because you

want the trigger to only execute once for the entire event.

Question 38

0.5 out of 0.5 points



Given an Employee table with columns for salary and dept, to raise the salaries of all employees in the sales department by 10%, write which of the following?

Selected Answer: ☒ D. UPDATE Employee SET salary = salary*1.10 WHERE dept='sales';

Answers:

A. UPDATE Employee LET salary = salary*1.10 WHERE dept='sales';

B. UPDATE salary SET salary = salary*1.10 WHERE dept='sales';

C. UPDATE Employee SET salary = 1.10 WHERE dept='sales';

☒ D. UPDATE Employee SET salary = salary*1.10 WHERE dept='sales';

Response
Feedback:

Ahead: Manipulating the Database: SQL Data Manipulation Language (DML)

Complexity: Moderate

Subject: Chapter 5

Title: Relational Database Management Systems and SQL

Question 39

0.5 out of 0.5 points



The COMMIT command does not permanently save all changes. In order to do that, you must use SAVE.

Selected Answer: ☒ False

Answers:

True

☒ False

Question 40

0.5 out of 0.5 points



Which two statements are true? (Choose two.)

Selected Answers:

A function must return a value.

☒ a.

A function can be invoked from within a PL/SQL expression.

☒ d.

Answers:

A function must return a value.



a.

Functions and procedures must return a value.

b.

Functions and procedures must contain IN arguments.

c.

A function can be invoked from within a PL/SQL expression.



d.

A procedure must be invoked from within a PL/SQL expression.

e.

Response

Feedback:

A function must return a value, and a function can be invoked from within a PL/SQL expression. Only functions

must return a value and can be invoked as part of a PL/SQL expression. Functions can also be invoked from a

SQL statement if it returns an Oracle server internal data type and does not modify database tables.

Procedures are not required to return a value.

While functions and procedures can have IN arguments, neither functions nor procedures require IN arguments.

A procedure is not invoked from within a PL/SQL expression. Within PL/SQL, a procedure is invoked using only

the procedure name and its parameter list. For example:

```
get_budget(3,2000);
```

This statement would invoke the `get_budget` procedure passing it the parameter values of 3 and 2000 .

Friday, November 4, 2022 12:11:40 AM EDT

← OK