Sample Mid Term Exam MIS 381N

**Question 12 pts**

A constraint that limits the input to specific values that can be stored in a column is called a/an \_\_\_\_\_\_\_\_ constraint.

Group of answer choices

UNIQUE

DEFAULT

CHECK

NOT NULL

**Question 22 pts**

If you define a column with a default value, that value is used whenever a row

Group of answer choices

with a zero value for that column is added to the table

in the table is updated

that doesn’t include a value for that column is added to the table

is added to the table

**Question 32 pts**

To modify the structure of an existing table, you use the \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TABLE statement(s):

Group of answer choices

ALTER

MODIFY

CREATE

DROP and ADD

UPDATE

**Question 42 pts**

Which of the following is the correct syntax order to define a column in a CREATE TABLE statement?

Group of answer choices

[Constraint], Data Type, Column Name

Column Name, [Constraint], Data Type

Column Name, Data Type, [Constraint]

Data Type, [Constraint], Column Name

Data Type, Column Name, [Constraint]

**Question 52 pts**

When you write a script for creating a database,

Group of answer choices

you need to create the primary key tables before you create the foreign key tables

you need to create the foreign key tables before you create the primary key tables

you need to code the primary key column first in each table

you can create the tables in whatever order you prefer

**Question 62 pts**

When you create a sequence, you can determine all but one of the following. Which one is it?

Group of answer choices

the number that the sequence should be increased by

the primary key that the sequence applies to

the starting value for the sequence

the size of the cache for the sequence

the minimum value the sequence can be

**Question 72 pts**

Which of the following is **NOT**true about creating indexes?

Group of answer choices

Oracle does not automatically create indexes for foreign keys

Oracle automatically creates indexes for primary keys

Indexes should be placed on columns heavily used in search

Indexes typically should not be placed on foreign keys

**Question 82 pts**

Features of a 'defensive data strategy' **DO NOT** include which of these:

1. Focus on supporting revenue growth, profitability, and customer satisfaction
2. Minimize downside risk
3. Generate customer insights (data analysis and modeling)
4. Ensure compliance with regulations (rules governing data privacy & integrity of financial reports)
5. Use analytics to detect & limit fraud
6. Build systems to prevent theft

Select the BEST answer.

Group of answer choices

II and III only

III only

I only

I and III only

IV only

I, II and III only

**Question 92 pts**

SSOT is the result of the business-specific transformation of data into information—data imbued with “relevance and purpose”, serving each domain in the organization for efficiency of analysis separately, derived from the MVOT.

Group of answer choices

True

False

**Question 102 pts**

We have the following tables with the associated columns:  
Orders: OrderId, OrderDate  
OrderLineItems: OrderId, OrderSequence, ProductID  
Products: ProductId, ProductName  
Which column or columns in each table are foreign keys?  
**(Please see Figure below)**

Group of answer choices

Orders: none; OrderLineItems: OrderID and ProductID; Products: none

Orders: OrderID; OrderLineItems: OrderSequence; Products: ProductID

Orders: none; OrderLineItems: OrderID and OrderSequence; Product: none

Orders: OrderID; OrderLineItems: OrderID and OrderSequence; Products: ProductID

**Question 112 pts**

We have the following tables with the associated columns:  
Orders: OrderId, OrderDate  
OrderLineItems: OrderId, OrderSequence, ProductID  
Products: ProductId, ProductName  
Which column or columns in each table should be defined as the primary key? (Note in some cases it need not be one column but a combination)  
**(Please see Figure below)**

Group of answer choices

Orders: OrderID; OrderLineItems: OrderID, OrderSequence, and ProductID; Products: ProductID and ProductName

Orders: OrderID; OrderLineItems: OrderID and OrderSequence; Products: ProductID

Orders: OrderID and OrderDate; OrderLineItems: OrderID and OrderSequence; Products: ProductID

Orders: OrderID; OrderLineItems: OrderID; Products: ProductID

**Question 122 pts**

Which of the following does **not violate** the referential integrity of a database?

Group of answer choices

Updating a foreign key with a value that doesn’t match a primary key in the related table

Inserting a new row into a table with a foreign key that doesn’t match a primary key in the related table

Deleting a row in a foreign key table without deleting the related row in the related primary key table

Updating a primary key in a primary key table without also updating the foreign keys for the related rows in all related tables

This is a trick question! All options will violate integrity!

**Question 132 pts**

When the query below is executed what will the result set contain?

SELECT Inv.vendor\_id, MAX(inv.invoice\_total) AS "LargestInvoice"  
FROM invoices Inv INNER JOIN  
                (SELECT vendor\_id, AVG(invoice\_total) AS "AverageInvoice"  
                  FROM invoices  
                 GROUP BY vendor\_id) InvoiceAverages  
        ON Inv.vendor\_id = InvoiceAverages.vendor\_id  
GROUP BY Inv.vendor\_id  
ORDER BY "LargestInvoice" DESC  
  
Select the BEST answer.

Group of answer choices

One row for each invoice in the InvoiceAverages table

One row for each vendor in the InvoiceAverages table

One row for each invoice

One row for each vendor/invoice combination in the invoices table

**Question 142 pts**

Can a dataset can be in the 3NF without being in the 2NF. The definitions of 3NF and 2NF are from what was discussed in class.

Group of answer choices

True

False

**Question 152 pts**

Tables that are in a “denormalized” format typically result in all but one of the following. Which one is it?

Group of answer choices

more complicated SQL coding

larger tables

reduced flexibility in the questions that can be answered

redundant data

**Question 162 pts**

Being able to grant granular permission to areas in the database is one of the pros of normalization of the database

Group of answer choices

True

False

**Question 172 pts**

When coded in a WHERE clause, which of the following search expressions will NOT return a result set that includes all invoices with an invoice\_total value of $1,000 or less?

Group of answer choices

NOT (invoice\_total > 1000)

invoice\_total <= 1000

invoice\_total IN (0, 1000)

Trick question! All the answers will work!

**Question 182 pts**

In a JOIN, column names should be unambiguously qualified (i.e. the column name should be specified as <table\_name>.<column\_name>) in which of the following situations?

Group of answer choices

when the same column names are used in the tables being joined

when the code is confusing

only for columns in the SELECT clause

for all outer joins

This is a trick question! The tool understands unique and non-unique (but identical) columns and does not need the table name when referencing.

for all inner joins

**Question 192 pts**

What does the query below do?

CREATE TABLE *planetary\_missions\_to\_Mars\_back* AS  
    SELECT *\**  
    FROM  *Sandbox\_mission\_to\_Mars*;

Group of answer choices

This is a trick question! None of the given answers is correct!

Creates a new table called Sandbox\_mission\_to\_Mars, and copies the table planetary\_mission\_to\_Mars\_back to it

This will return an error, since no alias name is given after the keyword 'AS' in the script

This will return an error, since one cannot perform a 'SELECT \* '

Creates a new table called planetary\_mission\_to\_Mars\_back, and copies the table Sandbox\_mission\_to\_Mars to it

**Question 202 pts**

For a subquery in a WHERE clause as show below:

SELECT \* FROM Customers  
WHERE Country IN (SELECT Country FROM Suppliers);

What is the valid result that the subquery can return?

Group of answer choices

One column of one or more rows

A table with more than one column

A single value

This is a trick question! A subquery cannot be used in a WHERE clause

**Question 212 pts**

Consider the SQL code below and choose the best answer from the options.

DELETE FROM Customers WHERE CustomerName='James Bond';

COMMIT;

ROLLBACK:

How does the number of rows in the table Customers change after the above set of commands?

Choose the BEST answer.

Group of answer choices

One row less.

The entire table is deleted

No Change in the number of rows

One or more rows less if there was a customer with the name 'James Bond'

**Question 222 pts**

Our class consists of two sections, with 50 students in each. Each section lists the students from 1 to 50, the Grade they get, and their StudentID

Consider the following command:

SELECT Student\_number, Grade, StudentID

FROM MIS381\_section1

UNION

SELECT Student\_number, Grade, StudentID

FROM MIS381\_section2;

Is it possible that in the first column of the resulting table, multiple rows have the same value?

Group of answer choices

True

False

**Question 232 pts**

Can the number 314159.26 be stored in a column defined as a datatype NUMBER(6, 2)?

Group of answer choices

True

False

**Question 242 pts**

What does the A in ACID compliance of the database signify.

Select the best answer.

Group of answer choices

From one consistent state to another, like a state machine

Committed transactions must be fully recoverable

Transaction completes in entirely or not at all… no half done work

Each action independent of another, no mix and match

**Question 252 pts**

Which analytical function or column function would you use to return the oldest date in the invoice\_date column?

Group of answer choices

ORDER BY invoice\_date

ORDER by invoice\_date DESC

MIN(invoice\_date)

MAX(invoice\_date)

FIRST(invoice\_date)

**Question 265 pts**

The SQL statement below has 5 errors. Find and identify all the errors:

CREATE TABLE Employee  
  
(  
  
    EmployeeId        varchar2(20),     primary key,  
  
    EmployeeFirstName  varchar2(30),  
  
    EmployeeLastName   varchar2(40),  
  
    EmployeeEmail      varchar2()  UNIQUE  
  
    EmployeePhone     chars(12),  
  
    birthdate   date,    
  
)

**Question 275 pts**

We have a denormalized entity named WebBrowsingHistory with the following columns:  
VisitorId, VistorFirstName, VisitorLastName, WebsitesVisited, WebsiteTypes.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| VisitorID | VisitorFirstName | VisitorLastName | WebsitesVisited | WebsiteType |
| 001 | Amitabh | Bachchan | Google.com, NYTimes.com | Search, News |
| 002 | James | Bond | CNN.com, Bing.com | News, Search |

Create a normalized model using three tables. You will be graded on using the best practices and notations discussed in class. You may add primary keys as needed.

Please provide the details in the form of tables you create and their columns. In addition indicate which are the primary keys in the tables

**Question 285 pts**

For the three entities modeled for the WebBrowsingHistory model, create a DDL **script**.  You will be graded on using the best practices discussed in class.

**Question 295 pts**

Find any 5 syntax errors in the SQL query below:

SELECT invoice\_id, invoice\_name invoice\_total,   
FROM invoices,  
ORDER BY invoice\_total DSC,  
HAVING invoice\_total > 100

**Question 305 pts**

Write a SQL statement to select all the products that have a price above the average price from the table Products:

|  |  |  |
| --- | --- | --- |
| **ProductID** | **ProductName** | **ProductCost** |
| 01 | Chocolates | 20 |
| 02 | Cakes | 30 |
| 03 | Oranges | 5 |
| 04 | Apples | 17 |

**Question 315 pts**

Write a SQL query that pulls a list of states from the customers\_om table and includes the number of customers in each state sorted from highest to lowest. Include only the states that have more than 1 customer.

**Question 325 pts**

Explain the pros and cons of normalization and denormalization. You will be graded for completeness as discussed in class and how well you articulate your answer.

**Question 335 pts**

If you were assigned the task of defining the data management strategy  for a firm, what will be the factors that you will take into account in determining that strategy and what will be the components of the strategy?

You will be graded for completeness as discussed in class and how well you articulate your answer.

**Question 345 pts**

As discussed in class, describe the strengths of a relational database.

You will be graded for completeness as discussed in class and how well you articulate your answer.

**Question 355 pts**

As discussed in class, describe the issues with a relational database.

You will be graded for completeness as discussed in class and how well you articulate your answer.